BROUGHT TO YOU BY

MEDAIDPK

EMPOWERING YOU

WITH KNOWLEDGE!

MEDAIDPK.COM

Contents

01 CHAPTER

Definitions and Basic Concepts of Health and Disease

1. **A researcher wants to find out the missing cases of a disease in a community. The method for identifying these missing cases is known as:**
   a) Monitoring
   b) Final checking
   c) Secondary prevention
   d) High-risk strategy
   e) Sentinel surveillance

2. **An epidemiologist wants to study the natural course of a disease as it evolves without any intervention. This is known as:**
   a) Spectrum of disease
   b) Natural history of disease
   c) Clinical features of disease
   d) Epidemiology of disease
   e) Surveillance of disease

3. **An expert in public health estimated the quality of life of the people of a country. The indicators he/she determined were: infant mortality rate, life expectancy at age one year, and literacy rate. The combination of these three indicators is known as:**
   a) Quality Adjusted Life Year (QALY)
   b) Disability Adjusted Life Year (DALY)
   c) Sullivan's Index
   d) Physical Quality of Life Index (PQLI)
   e) Human Development Index (HDI)

Key:	1.e)	2.b)	3.d)

4. **The definition, 'it is prevention and treatment of sexually transmitted diseases', refers to:**
   a) Social Medicine
   b) Social Hygiene
   c) Social Anatomy
   d) Social Pathology
   e) Social Physiology

5. **An investigator wants to assess the 'Physical Quality of Life Index' of a population. For this purpose he/she should find out:**
   a) Infant mortality rate and per capita income
   b) Crude death rate and literacy rate
   c) Crude birth rate and crude death rate
   d) Infant mortality rate, life expectancy at age one year and literacy rate
   e) Level of air pollutants

6. **Human Development Index includes:**
   a) Life expectancy at birth
   b) Adult literacy rate and per capita income
   c) Dependency ratio and percentage of population living below poverty line
   d) Life expectancy at birth, adult literacy rate, and income
   e) Number of primary health care facilities

7. **Health is multi-dimensional. The dimension that is the easiest to understand is:**
   a) Mental dimension
   b) Nutritional dimension
   c) Physical dimension
   d) Vocational dimension
   e) Psychological dimension

Key:	4.b)	5.d)	6.d)	7.c)

8. **A researcher wants to carry out 'community diagnosis'. For this purpose he/she should:**
   a) Determine the socio-economic condition of the community
   b) Diagnose diseases at mass level
   c) Perform close scrutiny of risk factors
   d) Identify and quantify health problems in the community
   e) Perform screening for communicable diseases

9. **An official wants 'monitoring' of a health project. For this purpose, which of the following activities should he/she carry out?**
   a) Assessment of achievement of the objectives
   b) Checking the activities of the students in the class
   c) Determining what steps to be taken in a health plan
   d) Motivating the people to do the work
   e) Day-to-day follow-up of the activities during their implementation

10. **The minimum expenditure on health out of total GNP of a country, as recommended by WHO, should be:**
    a) 2%
    b) 3%
    c) 4%
    d) 5%
    e) 6%

11. **The definition, It is a programme of instructions in which the students, in small, groups, learn by analysing and then resolving the problem, refers to:**
    a) Community oriented medical education
    b) Integrated teaching
    c) Human resource development
    d) Problem-based learning
    e) Research methodology

Key:	8.d)	9.e)	10.d)	11.d)

12. Community-based education means:

a) The students learn in small groups, by analysing and then resolving the problem
b) A system of education which is done outside the teaching hospital e.g., in rural health centre
c) Two-way group discussions
d) Education of community
e) Competency Based Education

13. Community oriented medical education means that:

a) Various medical disciplines are combined together
b) A system of education which is done outside the teaching hospital
c) Competency based education
d) Two-way group discussions
e) Relevant Medical Education

14. One of the qualities of a '5-star doctor' is that he or she should:

a) Be authoritative
b) Be handsome
c) Have good command over English language
d) Be talkative
e) Be a good manager

15. The actions that include promotion of health, prevention of sickness, and curative and restorative medicine in all aspects, is known as:

a) Specific protection
b) Health protection
c) Public health
d) Primary prevention
e) Rehabilitation

Key:	12.b)	13.e)	14.e)	15.b)

16. The first case of a disease in a community which comes into attention of the investigator is called a/an:

a) Primary case
b) Index case
c) Introducing case
d) Basic case
e) Initial case

17. Choose the best option regarding web of causation.

a) It explains the natural history of the disease
b) It is suitable for chronic diseases
c) There is usually only one suspected cause
d) It signifies that the disease cannot be controlled
e) It means spider-borne diseases

18. The study of mutual relationship between living organisms and their environments is known as:

a) Sociology
b) Ecology
c) Anthropology
d) Archeology
e) Biology

19. An expert makes a plan to limit tuberculosis to such an extent that it is no longer a major health problem. This is known as:

a) Disease eradication
b) Disease elimination
c) Disease control
d) Disease suppression
e) Disease prevention

Key:	16.b)	17.b)	18.b)	19.c)

20. In a factory there was a sudden blast as a result of which a labourer lost his/her hearing power. He/she was provided with hearing aid by the management of the factory. This is known as:

a) Vocational rehabilitation
b) Psychological rehabilitation
c) Social rehabilitation
d) Medical rehabilitation
e) Anatomical rehabilitation

21. A researcher carried out a survey in an urban slum population. His/her objective was to identify and quantify the main health problems in that community. This is known as:

a) Community assesment
b) Community diagnosis
c) Community participation
d) Community requirement
e) Assessment of unmet needs of community

22. The definition, 'It is a system of education which aims to delineate the competency an individual should have on completion of an educational course, for example, adapt to and participate in change, pursue-life long self-directed education, reason critically, participate productively, and communicate effectively, etc', refers to:

a) Integrated Curriculum
b) Community Based Education
c) Problem Based Learning
d) Competency Based Education
e) Comprehensive Education

Key:	20.d)	21.b)	22.d)

23. Experts recommend that health services should have an optimum mix of preventive, curative, and promotional services. This criterion is known as:

a) Appropriateness
b) Comprehensiveness
c) Adequacy
d) Availability
e) Accessibility

24. Experts recommend that expanded programme of immunization should be merged into the services of primary health care centres (Basic Health Units and Rural Health Centres). This is known as:

a) Comprehensive health care services
b) Combined health care services
c) Primary health care services
d) Community based services
e) Integrated health services

25. The invent of 'germ theory' gave the better understanding of communicable diseases causation. This led to scientific preventive measures instead of fatalistic attitude. The man who first proposed the germ theory was:

a) Robert Koch
b) Hippocrates
c) Rigvida
d) Louis Pasteur
e) Ronald Ross

26. A doctor advised physiotherapy to a child who has flaccid paralysis of lower limb due to poliomyelitis in the past. This advice is known as:

a) Primordial prevention
b) Primary prevention
c) Secondary prevention
d) Tertiary prevention
e) Specific protection

Key:	23.b)	24.c)	25.d)	26.d)

27. An investigator wants to compare the health status of the whole population of one country with other countries with the help of only one health indicator. The best choice would be:
a) Crude death rate
b) Crude birth rate
c) Infant mortality rate
d) Sullivan's index
e) Physical Quality of Life Index (PQLI)

28. A student from Kenya came to Pakistan to take admission in a medical college. At the airport the doctor in-charge found that he/she was healthy but had no valid certificate against yellow fever. The doctor ordered that the student should be restricted from moving out and be kept in a mosquito-proof residence for 6 days. This precautionary measure is known as:
a) Isolation
b) Prevention
c) Chemoprophylaxis
d) Quarantine
e) Surveillance

29. In a country where there is no problem of environmental pollution, legislation is made to have efficient vehicle engines and to have hydro-electricity power plants instead of coal power plants to prevent air pollution. This is an example of:
a) Primordial prevention
b) Specific protection
c) Primary prevention
d) Legislative prevention
e) Rehabilitation

Key:	27.c)	28.d)	29.a)

30. Which of the following dimension does the definition of health as given by WHO include?
a) Physical
b) Religious
c) Social
d) a and b
e) a and c

31. In Millennium Development Goals, (G.T.I.) written in parenthesis are pertaining to:
a) Goal number, Target number, and Indicator number
b) Gravity, Tolerance, and Illness
c) General Fertility Rate, Total Fertility Rate, and Individual Fertility Rate
d) Gross National Product, Total National Product, and Individual Production Ratio
e) Global Temporal Index

32. A study was carried out among school children to estimate the incidence of measles. The study was completed in one week. The incidence rate was 1%. An expert expected that the actual incidence is much higher. The most likely reason for that could be:
a) Poor data collection technique
b) Iceberg phenomenon of disease
c) Short duration of the study
d) Non-cooperation of the parents
e) Existence of carrier state

33. Iodized salt is recommended instead of common salt in population where there is deficiency of iodine in soil. This advocacy is an example of:
a) Health promotion
b) Specific protection
c) Prompt treatment
d) Disability limitation
e) Rehabilitation

Key:	30.e)	31.a)	32.c)	33.b)

34. **A doctor advised a 40-year-old woman to have periodical mammography. This is an example of:**

a) Primordial prevention
b) Primary prevention
c) Secondary prevention
d) Tertiary prevention
e) Health protection

35. **During mammography screening, a woman was detected to have cancer of breast in initial stage. Total mastectomy was performed. This is an example of:**

a) Health promotion
b) Specific protection
c) Early diagnosis and prompt treatment
d) Disability limitation
e) Medical rehabilitation

Key:	34.c)	35.c)

02 CHAPTER

Epidemiology and Screening for Diseases

1. **To calculate the incidence rate of malaria in children of 1 to 5 years of age group, in a village in one year, the denominator should be:**

a) Total population of the village in the same year
b) Total number of infants of the village in the same year
c) Total number of live births in the village in the same year
d) Total number of children of one to five years of age group in the village in the same year
e) Total number of children upto five years of age group

2. **In which of the following diseases determining the 'secondary attack rate' will be appropriate?**

a) Cancer of lung in tobacco smokers
b) Diabetes
c) Coronary heart disease
d) Protein energy malnutrition
e) Chickenpox

3. **The time interval between receipts of infection by a host and maximum infectivity of the host is called:**

a) Communicable period
b) Generation time
c) Incubation period
d) Latent period
e) Period of infectivity

Key:	1.d)	2.e)	3.b)

4. **In a poor community, there is high prevalence of acute diarrhoea cases. The best method of preventing this health problem in the long run is:**
   a) Use of anti-diarrhoeal drugs
   b) Hand washing before eating
   c) Provision of sanitary latrine
   d) Use of boiled water
   e) Personal hygiene

5. **A researcher wants to carry out 'screening' to identify the missing cases of a disease in a specific community. For this purpose the subjects to be chosen for screening test should be:**
   a) Persons with mild illness
   b) Persons without an apparent illness
   c) Persons with overt disease
   d) Persons with malignant disease
   e) Persons who have positive family history

6. **For setting up priorities, in general dealing with health problem in an area, which of the following parameters is inappropriate?**
   a) Feasibility to control
   b) Prevalence of the health problem
   c) Seriousness of the problem
   d) People demand and attitude
   e) Climatic conditions

7. **Usually first approach for testing an etiological 'hypothesis' is:**
   a) Clinical trials
   b) Cohort study
   c) Case control study
   d) Experimental study
   e) Double blind study

Key:	4.c)	5.b)	6.e)	7.c)

8. **The time interval between invasions by an infectious agent and the appearance of the first sign and symptom of disease in question, is known as:**
   a) Communicable period
   b) Generation time
   c) Incubation period
   d) Latent period
   e) Infectious period

9. **One basic tool of measurement in epidemiology is:**
   a) Mean
   b) Rate
   c) Range
   d) Standard deviation
   e) Mean deviation

10. **According to the traffic safety rules every motor cyclist should wear a helmet. This rule falls in:**
    a) Primordial level of prevention
    b) Primary level of prevention
    c) Secondary level of prevention
    d) Tertiary level of prevention
    e) Chemoprophylaxis

11. **Cohort study is also known as 'incidence study'. Its one advantage is that:**
    a) It is suitable for rare diseases
    b) It involves fewer numbers of subjects
    c) There is no attrition problem
    d) Incidence rate can be calculated
    e) Prevalence rate can be calculated

Key:	8.c)	9.b)	10.b)	11.d)

12. **The definition, 'It is an art and science of health promotion, disease prevention, disability limitation, and rehabilitation' refers to:**
a) Community Medicine
b) Family Medicine
c) Preventive Medicine
d) Social Medicine
e) Public Health

13. **During a cross sectional study, a researcher finds the total number of cases of pulmonary tuberculosis at a given point of time in an urban slum population. This is known as:**
a) Incidence
b) Prevalence
c) Epidemiological rate
d) Attack rate
e) Morbidity rate

14. **Which one of the following factors will not affect the length of incubation period?**
a) Dose of inoculums
b) Speed by which the host's defense mechanism is mobilized
c) The rate of multiplication of the specific organism in human host
d) The age of susceptible host
e) Host's immunity against the specific infection

15. **A survey was carried out to find the prevalence of tuberculosis in a poor community of 10,000 population. There were 200 cases of tuberculosis. The prevalence of tuberculosis is calculated as:**
a) 200 /10,000
b) 10,000 / 200
c) (10,000 /200) x 1000
d) (200 /9800) x 10000
e) (200 /10,000) x 1000

Key:	12.c)	13.b)	14.d)	15.e)

16. **Edward Jenner inoculated an 8-year-old boy with cow pox material and after six weeks exposed him to small pox. This was an example of:**
a) Analytical study
b) Cohort study
c) Direct human experimentation
d) Therapeutic trial
e) Case control study

17. **In a hospital, isolation rooms are reserved for:**
a) Contacts, but healthy persons
b) Patients suffering from cancer
c) Patients suffering from infectious diseases
d) Susceptible hosts
e) Immune person

18. **Choose the correct option regarding disinfections/ sterilization.**
a) Antiseptics cannot be used on skin
b) Autoclaves are used to sterilize plastic instruments
c) Disposable syringes are sterilized with radiation
d) Formalin can be used as an antiseptic
e) Antiseptics kill all type of micro-organisms

19. **Measures involved in disease control in a community include all of the following EXCEPT for:**
a) Verification of case
b) Confirmation of the epidemic
c) Isolation of cases
d) Studying ecofactors
e) Surveillance of the disease

Key:	16.c)	17.c)	18.c)	19.b)

20. Experimental Epidemiology deals with:

a) Epidemics
b) Intervention
c) Screening of disease
d) Early diagnosis
e) Disability limitation

21. Regarding cohort study:

a) Selection of comparison group is quite easy
b) Study itself may alter people's behaviour
c) It involves a small number of people
d) Usually a short duration is required for completion of study
e) It is a type of experimental study

22. Case control study is one of the most popular epidemiological studies.

a) In this study, both exposure and outcome have occurred before the start of the study
b) It is a costly study
c) The study is carried out from cause to effect
d) Usually no control is required to support or refute the inference/ hypothesis
e) Incidence rate is found in this study

23. A researcher wants to estimate the status of health and level of living of the people in a community, which one of the following indicators should be chosen for this purpose?

a) Infant mortality rate
b) Maternal mortality rate
c) Neonatal mortality rate
d) Perinatal mortality rate
e) Crude death rate

24. In the Case Control epidemiological studies, the cross products of data in a 2 x 2 contingency table is known as:

a) Odds ratio
b) Relative risk
c) Risk difference
d) Risk ratio
e) Attributable risk

25. The definition, 'Number of exposed persons developing the disease within the range of incubation period following exposure to the primary case', refers to:

a) Prevalence rate
b) Attack rate
c) Secondary attack rate
d) Infection rate
e) Communicability rate

26. Secondary attack rate:

a) It measures the mortality rate of a disease
b) It is useful to measure in both communicable and non-communicable diseases
c) It gives us an estimate of prevalence of a disease
d) It determines whether a disease of unknown etiology is communicable or not
e) It tells us about prognosis of a disease

27. The condition in which the infecting virus lies dormant in the host and this host does not shed the infectious agent, is known as:

a) Latent infection
b) Sub-clinical infection
c) Overt illness
d) Covert illness
e) In apparent cases

28. **Which of the following statements regarding 'sub-clinical infection is true?**
a) The infecting agent is not present in the host
b) It can only be produced by passive immunization
c) It does not exist in Typhoid
d) This condition is also known as latent infection
e) It is one of the natural ways of enhancing the level of the herd immunity

29. **A researcher while studying the prevalence of a chronic disease, observed the changes in occurrence of the disease over a long period of time i.e., in decades. This time trend is known as:**
a) Periodic fluctuation
b) Secular trend
c) Cyclic trend
d) Seasonal trend
e) Long-period trend

30. **The condition when a disease is constantly present in a community at a high incidence and prevalence rate and affects all age groups equally is known as:**
a) Hyper-endemic
b) Epidemic
c) Pandemic
d) Endemic
e) Epizootic

Key:	28.e)	29.b)	30.a)

31. **An investigator while studying a disease used the following formula:**

$$= \frac{\text{Incidence of disease among exposed minus Incidence of disease among non exposed}}{\text{Incidence of disease among exposed}} \times 100$$

Which of the following is he/she calculating?
a) Incidence rate
b) Prevalence rate
c) Odds ratio
d) Relative risk
e) Attributable risk

32. **In order to test the efficacy of a new drug, a researcher had so planned the study that neither the assistant researcher who administered the drug nor the participants (patients) were aware of the group allocation and treatment received. This is an example of:**
a) Case control study
b) Cohort study
c) Single-blind experimental study
d) Double-blind experimental study
e) Cross-sectional study

33. **The definition, 'The gap in time between the onset of a primary case and the secondary case', refers to:**
a) Generation time
b) Median incubation period
c) Latent period
d) Serial interval
e) Communicable period

Key:	31.e)	32.d)	33.d)

34. **In a family of 9 people, 2 are immune to measles. There occurs a primary case of measles and within a short time 3 secondary cases appear in the same family. The secondary attack rate will be:**

a. $\frac{3}{7}$ X 100.

b. $\frac{3}{9}$ X 100.

c. $\frac{3}{6}$ X 100.

d. $\frac{3}{5}$ X 100.

e. $\frac{2}{9}$ X 100.

35. **Sensitivity of a screening test is calculated by the formula:**

a. $\frac{a}{a+c}$ X 100.

b. $\frac{a}{a+b}$ X 100.

c. $\frac{b}{a+b}$ X 100.

d. $\frac{b}{c+d}$ X 100.

e. $\frac{c}{c+d}$ X 100.

36. **A screening test has 94% specificity. It means that test will detect:**

a) 6 negative cases out of 94 true negative cases
b) 94 negative cases out of 100 true negative cases
c) 94 positive cases out of 100 true positive cases
d) 94 negative cases out of 100 total cases
e) 94 positive cases out of 100 total cases

Key:	34.c)	35.a)	36.b)

37. **Regarding temporal association, which of the following statements is true?**

a) In this, the illness precedes the suspected cause
b) It is easier to establish in acute diseases than in chronic diseases
c) It confirms the association between suspected cause and its effects
d) It can be found out in cross-sectional studies
e) It is associated with temporal bone

38. **An investigator while studying a disease used the following formula:**

Number of deaths due to a specific disease in an area in one year
= ---------- x 100
Total number of deaths in same area in same year.

Which of the following is he/she calculating?

a) Proportional mortality rate
b) Disease-specific mortality rate
c) General mortality rate
d) Crude death rate
e) Morbidity rate

39. **Regarding cross-sectional studies, which of the following statements is true?**

a) They are more useful for chronic diseases than acute diseases
b) The incidence rate can be found out
c) The natural history of disease can be found out
d) They are more time-consuming
e) They are difficult to conduct as compared to longitudinal studies

40. **In Epidemiology, longitudinal studies:**

a) Help to study the natural history of disease
b) Cannot help to identify the risk factor for disease
c) Are ideal to find the prevalence rate
d) Are easier to conduct as compared to cross-sectional studies
e) Are less time-consuming than cross-sectional studies

Key:	37.b)	38.a)	39.a)	40.a)

41. **Validity of a screening test includes:**
   a) Acceptability
   b) Repeatability
   c) Yield
   d) Specificity and sensitivity
   e) All of the above

42. **The question, 'Does the suspected cause precede the observed effect?' shows:**
   a) Consistency of association
   b) Strength of association
   c) Biological plausibility
   d) Coherent of association
   e) Temporal association

43. **From previous record, two groups were chosen. Group one was exposed to risk factor. The other group was not exposed to risk factor. Both the groups were followed up to note the incidence of disease. What type of Epidemiological study is this?**
   a) Descriptive study
   b) Case control study
   c) Prospective cohort study
   d) Retrospective cohort study
   e) Experimental study

44. **Rabies is not present in England; but if imported into the country, will be known as a/an:**
   a) Exotic disease
   b) Pandemic disease
   c) Sporadic disease
   d) Endemic of disease
   e) Hypo-endemic disease

Key:	41.d)	42.e)	43.d)	44.a)

45. **Hospital-borne children are usually associated with higher perinatal mortality rate as compared to home-borne children. This type of association is known as:**
   a) Direct association
   b) Indirect association
   c) One-to-one casual association
   d) Spurious association
   e) Temporal association

46. **Statistical association between a character (variable) and disease due to the presence of a confounding factor is known as:**
   a) Spurious association
   b) Direct association
   c) Indirect association
   d) Temporal association
   e) Specific association

47. **An epidemiological study was carried out to assess the effect of healthy life style on coronary heart diseases. Two groups of people were formed; Group A was subjected to intensive health education aiming at modification of behaviour (more physical exercise, less fat, more fruits and no smoking). In group B, no health education was carried out. Both of the groups were followed for three years and the incidence of myocardial infarction was determined. Which type of study is this?**
   a) Descriptive epidemiological study
   b) Case control study
   c) Cohort study
   d) Experimental study
   e) KAP study

Key:	45.d)	46.c)	47.d)

48. **Out of the following epidemiological studies, which one is more likely to have ethical considerations?**
   a) Descriptive epidemiological study
   b) Case control study
   c) Cohort study
   d) Experimental study
   e) KAP study

49. **To test the hypothesis that the job stress for school teachers is a risk factor for diabetes, the investigator selected 100 teachers and 100 controls who were not teacher, matched on the basis of age and gender. Then the investigator followed both the groups of people to see how many got diabetes. The appropriate measure of risk for the study is:**
   a) Incidence rate
   b) Prevalence rate
   c) Odds ratio
   d) Relative risk
   e) Attributable risk

50. **The study design that can actually prove causation is called:**
   a) Cross-sectional descriptive study
   b) Case control study
   c) Cohort study
   d) Experimental study
   e) Detailed case study

Key:	48.d)	49.d)	50.d)

51. **The 'relative risk' in following data would be:**

Risk factor	Disease	
	+ve	-ve
+ve	80	920
-ve	4	996

   a) 5
   b) 10
   c) 15
   d) 20
   e) 25

52. **The 'odds ratio' in the following data would be:**

Risk factor	Disease	
	+ve	-ve
Exposed	22	55
Not exposed	2	10

   a) 2
   b) 4
   c) 5
   d) 8
   e) 10

53. **A technique by which the sexual partners of a patient suffering from a sexually transmitted disease, are identified, located, investigated, and treated, is called:**
   a) Screening
   b) Case holding
   c) Surveillance
   d) Cluster testing
   e) Contact tracing

Key:	51.d)	52.a)	53.e)

54. **Which of the following statements is appropriate for a ... control study?**
a) It is a prospective study
b) Compared to cohort study, it is difficult to carry out
c) It is not a cost-effective study
d) There may be 'recall bias'
e) The problem of attrition is common

55. **Twenty people took food in a restaurant. After a few ... 10 got an attack of food poisoning. The attack rate will ... calculated as:**
a) (10/10) x 100
b) (10/20) x 100
c) (20/20) x 1,000
d) 20/20
e) 10/10

56. **A foreigner comes to Pakistan in rainy season. To protect him against malaria, the doctor prescribes chloroquine tablets ... be taken once/week. This is an example of:**
a) Prophylactic treatment
b) Anticipatory treatment
c) Immuno prophylaxis
d) Chemoprophylaxis
e) International Travellers Safety Act

57. **There was an epidemic of meningococcal meningitis in a jail. Out of 1,000 prisoners, 100 suffered from the disease; and 10 of them died. The case fatality rate will be:**
a) 1%
b) 5%
c) 10%
d) 15%
e) 20%

Key:	54.d)	55.b)	56.d)	57.c)

58. **A researcher plans to find out the prevalence rate of coronary artery disease in a community. His/her study design will be:**
a) Cohort study
b) Case control study
c) Cross-sectional descriptive study
d) Quasi study
e) Experimental study

59. **A researcher wants to assess and compare the health status of the people of two countries. Out of the following mortality rates, which one is the best indicator for this purpose?**
a) Crude death rate
b) Infant mortality rate
c) Mortality rate under-5
d) Age-specific death rate
e) Maternal mortality rate

60. **Diagnostic power of a screening test is reflected by:**
a) Sensitivity
b) Specificity
c) Predictive value
d) Relative risk
e) Attributable risk

61. **'Absolute risk' is a term used in various epidemiological studies. It is based on:**
a) Incidence
b) Prevalence
c) Odds ratio
d) Attack rate
e) Secondary attack rate

Key:	58.c)	59.b)	60.c)	61.a)

62. If the number of deaths due to coronary heart disease is expressed in relation to total deaths, it would be called:

a) Cause-specific death rate
b) Crude death rate
c) Age-specific death rate
d) Case fatality rate
e) Proportional mortality rate

63. A researcher plans for a cohort study to find out whether there is a significant association between a suspected risk factor and the disease. Regarding this type of study, which one of the following statements is correct?

a) It is a retrospective study
b) It involves fewer numbers of subjects
c) There is a problem of attrition
d) It is a cross-sectional study
e) It is a type of interventional study

64. A researcher was seeking additional criteria to find out association between a suspected risk factor and the disease. He/she found that the risk factor in question always precede the disease. This type of association is known as:

a) Direct association
b) Spurious association
c) Biological plausibility
d) Temporal association
e) Sequential association

Key:	62.e)	63.c)	64.d)

65. Sensitivity of a screening test is calculated by the formula:

a) $\frac{true\ negative}{false\ positive + true\ negative} \times 100.$

b) $\frac{true\ positive}{true\ positive + false\ positive} \times 100.$

c) $\frac{true\ positive}{true\ positive + false\ negative} \times 100.$

d) $\frac{true\ negative}{false\ negative + true\ negative} \times 100.$

e) $\frac{true\ negative}{true\ negative + false\ negtive} \times 100.$

66. An epidemiologist plans to find out the 'incidence' of measles among children in an urban community. The most appropriate type of epidemiological study in this case will be:

a) Descriptive study
b) Case control study
c) Cross-sectional study
d) Cohort study
e) Experimental study

67. Select the best option for the relationship between prevalence and incidence; assuming that the population, incidence, duration, and frequency are stable.

a) Prevalence = Incidence x Mean duration of illness
b) Prevalence = Incidence / Mean duration of illness
c) Prevalence = Frequency + Incidence
d) Prevalence = Frequency x Incidence
e) Prevalence = Mean Duration of illness x frequency

Key:	65.c)	66.d)	67.a)

68. A health official wants early detection of a dangerous disease like cancer in a community. Which one of the following criteria of a screening test is the most desireable in this situation?

a) High acceptability
b) High sensitivity
c) High specificity
d) High productivity
e) High affordability

69. A study was conducted in which cases and non cases (control) were compared with respect to exposure factors e.g. type of food eaten. What is the the study design?

a) Descriptive study
b) Case control study
c) Cohort study
d) Randomised control trial
e) Case study

70. A researcher wants to find out the prevalence of tuberculosis in an urban slum. Which of the following studies is most appropriate for this purpose?

a) Randomised controlled trial
b) Cross-sectional study
c) Case report
d) Double-blind study
e) Case control study

71. Any systemic error in a research that results in a inaccurate estimate of an effect of risk factor's exposure is called:

a) Double blinding
b) Bias
c) Systematic error
d) Type I error
e) Type II error

Key	68.b)	69.b)	70.b)	71.b)

72. Epidemiologists have found that coronary heart diseases and diabetes have shown consistent upward trend in developed countries during the past 50 years or so. This type of time distribution of disease is known as:

a) Seasonal trend
b) Cyclic trend
c) Secular trend
d) National variation
e) International variation

73. A total of 200 patients with lung cancer were identified and interviewed with reference to past exposure to smoking. At the same time 360 people from same socio-economic status were chosen who were not suffering from cancer. The history of smoking in this control group was also noted. This type of study is known as:

a) Cohort study
b) Clinical trial
c) Case series report
d) Cross-sectional study
e) Case control study

74. An epidemiologist conducted a 'case control study'. Analysis of the data resulted 'p' value = .035. If the alpha level was set at .05, then:

a) Null hypothesis would be accepted
b) Null hypothesis would be rejected
c) Cohort study should be conducted for further investigation
d) 'p' value is too low
e) Nothing could be concluded from this data

Key:	72.c)	73.e)	74.b)

75. Which one of the following can be labelled as 'fomite' if it is contaminated by the infectious discharges from a patient?

a) Water
b) Milk
c) Meat
d) Handkerchief
e) Fish

76. In a study of falciparum malaria, it was found that out of 100 people attacked, 7 died. The rate that was calculated is known as:

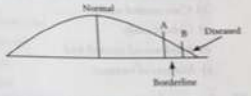
a) Proportional mortality rate
b) Case fatality rate
c) Age-specific death rate
d) Disease-specific rate
e) Mortality rate

77. Regarding screening test, choose the best option.

a) It does not form the basis of treatment
b) It is more accurate than a diagnostic test
c) It is costly
d) It cannot be applied to a large population
e) Predictive value of the positive and negative test cannot be calculated

Key:	75.(d)	76.(b)	77.(a)

78. The following curve shows the blood glucose level of people in a community. If the 'cut-off' point between disease and normality is set at level A, then it will make the test:



a) Highly sensitive
b) Highly specific
c) Highly valid
d) Highly accurate
e) Highly biased

79. a researcher carried out a cohort study to find out whether there is a statistically significant association between a suspected risk factor and the disease. The outcome of the analysis of the study data was: 'relative risk' = 0.2. The conclusion drawn would be:

a) There is a strong positive association between the risk factor and disease causation
b) There is weak positive association between the risk factor and disease causation
c) The risk factor has a protective effect on disease causation
d) Case control study should be carried out to find the 'relative risk'
e) No result can be drawn because 'relative risk' does not help to find the strength of association

80. An investigator wanted to find out any association between a risk factor and the disease. He calculated the ratio of chances that a case was exposed to the risk factor, to the chances that a control was exposed to the risk factor. This ratio is known as:

a) Odds ratio
b) Relative risk
c) Attributable risk
d) Secondary attack ratio
e) Primary attack ratio

Key:	78.(a)	79.(c)	80.(a)

81. In a hospital setting, which one of the following epidemiological studies is the most feasible?

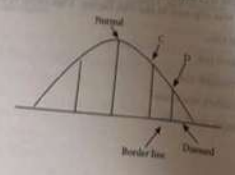
a) Descriptive epidemiological study
b) Case control study
c) Cohort study
d) Randomised control trial
e) Analysis of variance

82. A researcher is using a screening test that has 90% specificity. It means that:

a) The test will detect correctly 90% true positive cases
b) The test will detect correctly 90% true negative cases
c) 90% cases will be declared as false positive
d) 90% cases will be declared as false negative
e) The predictive value of the test will be 85%

83. Choose the best option regarding screening test if the cut-off point is set at 'D'.

a) Sensitivity will increase and specificity will decrease
b) Sensitivity will decrease and specificity will increase
c) Both sensitivity and specificity will increase
d) Both sensitivity and specificity will decrease
e) Predictive value of positive test will decrease



Key:	81.b)	82.b)	83.b)

84. An epidemiologist found that the annual death rate due to tuberculosis in an urban population is 2/1,000 per year. This mortality rate should be categorised as:

a) Crude death rate
b) Disease-specific death rate
c) Standardized death rate
d) Adjusted death rate
e) Epidemic death rate

85. An epidemiologist wants to find out the strength of association between the cause and the disease. Out of following which indicator will be the most appropriate for this purpose?

a) Incidence rate
b) Point prevalence rate
c) Period prevalence rate
d) Disease-specific rate
e) Cumulative infection rate

86. In a 'case control study', the analysis revealed 'odds ratio' = 5. It indicates that:

a) There is 5% chance of getting the disease due to exposure to the risk factor
b) There is 95% chance of getting the disease due to exposure to the risk factor
c) There is five times more chance of getting the disease among risk factor positive as compared to risk factor negative people
d) 5% of population can be saved by removing the risk factor
e) The benefit due to eliminating the risk factor will be 95%

Key:	84.b)	85.a)	86.c)

87. **If high cholesterol level leads to coronary heart disease, then lowering the cholesterol level should reduce the incidence of coronary heart disease. This can be proved by:**
   a) Case study
   b) Descriptive study
   c) Case control study
   d) Cohort study
   (e) Experimental study

88. **In context of 'association and causation' two variables are said to be casually related if change in one variable is followed by change in the other. This association is known as:**
   a) Spurious association
   b) Indirect association
   (c) One-to-one causal relationship
   d) Specific association
   e) Biological association

89. **If the association between suspected risk factor and outcome (disease) agrees with current understanding of the response of cell, tissue, and organ; then this association is known as:**
   a) Coherence of association
   (b) Biological plausibility
   c) Consistency of association
   d) Temporal association
   e) Strength of association

Key:	87.e)	88.c)	89.b)

90. **In an interventional study one group of the patients was given one drug in tablet form and another group was given a tablet with same colour, shape, and size but without medicine. This was in the doctor's knowledge, but none of the patients knew what was given to them. This procedure is known as:**
   a) Controlled trial
   b) Uncontrolled trial
   (c) Single-blind trial
   d) Double-blind trial
   e) Unbiased study

91. **A public health programme was launched in a poor community to reduce the prevalence of a particular disease. After the programme was carried out successfully, an epidemiologist was interested to find out the impact of the programme in reducing the prevalence of the disease. Out of following findings, which one is more appropriate for this purpose?**
   a) Absolute risk
   b) Relative risk
   (c) Attributable risk
   d) Risk index
   e) Odds ratio

92. **A cohort study was conducted to find out the strength of association between a suspected risk factor and the disease. Analysis of the data revealed 'relative risk' = 0.25. The conclusion drawn from this result is that:**
   a) There is 25% increased risk in the incidence rate in exposed individuals as compared to the unexposed
   b) There is 75% increased risk in the incidence rate in exposed individuals as compared to the unexposed
   c) There is 25 times increased risk in the incidence rate in exposed individuals as compared to the unexposed
   d) There is 25% reduction in the incidence rate in exposed individuals as compared to the unexposed
   (e) There is 75% reduction in the incidence rate in exposed individuals as compared to the unexposed

Key:	90.c)	91.c)	92.e)

93. **In a family a child got an attack of measles. Within a few days another child of that family also got measles. The gap in time between the onset of the primary case and the secondary case is called:**

a) Generation time
b) Serial interval
c) Communicable period
d) Median incubation period
e) Latent period

94. **To find out whether a statistically significant association exists between bottle feeding and diarrhea as compared to breast feeding and diarrhea; a case control study was conducted. The exposure rate to bottle feeding in diarrhea cases was 94.2% and in breast fed group 67%. The Chi square test showed $P < 0.001$. The conclusion drawn:**

a) There is a highly significant association between bottle-feeding and diarrhoea
b) There is a weak association between bottle-feeding and diarrhoea
c) There is no association between bottle-feeding and diarrhoea
d) There is negative association between bottle-feeding and diarrhoea
e) Is inconclusive

95. **A high frequency of nosocomial infection or hospital acquired infection is an evidence of of poor quality of health service delivery. The most common route of infection in this situation is:**

a) Air
b) Hands of healthcare workers
c) Contaminated syringes
d) Oral
e) Vertical transmission

Key:	93.b)	94.a)	95.b)

96. **Incubation period ranges from 10 days to three weeks in:**

a) Measles, mumps and rubella
b) Hepatitis B and hepatitis C
c) Cholera and food poisoning
d) AIDS and tuberculosis
e) Meningococcal meningitis and influenza

97. **An epidemiologist is using a screening test for early detection of unrecognized disease. In this scenario the time interval between diagnosis by early case detection with the help of screening test and diagnosis by other means is known as:**

a) Intrinsic incubation period
b) Extrinsic incubation period
c) Latent period
d) Serial interval
e) Lead time

98. **In early detection of a communicable disease with very high mortality, which one of the following criteria of a screening test is the most needed?**

a) Feasibility
b) Economy
c) High yield
d) High sensitivity
e) High specificity

99. **Chronic carriers of a communicable disease infect the susceptible individuals over a long period of time. The diseases in which this type of carriers exist include:**

a) Typhoid
b) Hepatitis B
c) Measles
d) a and b
e) a and c

Key:	96.a)	97.e)	98.d)	99.d)

100. Total number deaths of infants aged 28 days to 1 year / Total number of live births x 1,000

The above formula is used to calculate:

a) Early neonatal mortality rate
b) Late neonatal mortality rate
c) Post-neonatal mortality rate
d) Infant mortality rate
e) Perinatal mortality rate

101. An epidemiologist while studying epidemic of a disease finds the following features: Epidemic curve rises and falls rapidly, epidemic tends to explosive, and epidemic curve shows no secondary waves. Which type of epidemic is this?

a) Single exposure or point source epidemic
b) Cyclic trend epidemic
c) Continuous or multiple exposure epidemic
d) Secular trend epidemic
e) Propagated epidemic

102. A new campaign was launched to control HIV-AIDS in a high-risk community. After one year an epidemiologist planned to assess the effectiveness of this campaign. Which of the following parameters will be the most appropriate for this assessment?

a) Point-prevalence rate of HIV-AIDS
b) Period-prevalence rate of HIV-AIDS
c) Incidence rate of HIV-AIDS
d) Age-specific mortality rate due to HIV-AIDS
e) Mortality rate due to HIV-AIDS

Key:	100.e)	101.a)	102.c)

103. The components of Epidemiology include:

a) Frequency
b) Distribution
c) Determinants
d) a and b
e) a, b, and c

104. Which the following statements regarding 'standardized mortality ratio' is not true?

a) It is calculated by indirect age standardization
b) It is the ratio of observed deaths and expected deaths
c) It is useful for comparison
d) It can be calculated using the formula: (Observed deaths/ Expected deaths) x 100
e) It does not permit adjustment for age and other factors where age-specific rate is not available

105. Which of the following statements regarding 'secondary attack rate' is true?

a) It can be used for both infectious and non-infectious diseases
b) It cannot be used in measles and chickenpox because identification of 'susceptible' individuals may be difficult
c) It can be easily calculated in diseases with many sub-clinical cases
d) It is useful to determine, whether a disease of unknown etiology is communicable or not
e) It is more useful and easy to determine in diseases with long incubation period

106. An epidemiologist wants to determine the prevalence of pulmonary tuberculosis in an urban slum population. Which of the following study designs should he/she choose for this purpose?

a) Interventional study
b) Cohort study
c) Cross-sectional study
d) Single-blind study
e) Case control study

Key:	103.e)	104.e)	105.d)	106.c)

107. Regarding cross-sectional studies, choose the best option:

a) They are more useful for chronic diseases
b) They are more useful for acute diseases which last for a few days
c) Natural history of the disease can be found out
d) They help in establishing a causal association
e) They are more time-consuming than longitudinal studies

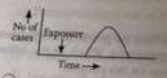
108. Epidemiological significance of 'carriers' is higher than 'cases', because:

(a) They infect more people
b) They increase the virulence of the agent
c) They are more infectious than cases
d) They can not be treated
e) They are symptomatic

109. Criteria of the disease for which the health authority should start a screening programme, include:

a) There is low prevalence of preclinical stage
b) Natural history of the disease is not known
(c) The disease is a serious public health problem
d) The treatment of the disease is difficult if detected early
e) The disease should be mild

110. Which type of epidemic curve does the following figure represent?



(a) Common source, single exposure
b) Common source, repeated exposure
c) Multiple sources, single exposure
d) Multiple sources, multiple exposure
e) Propagated curve

Key:	107.a)	108.a)	109.c)	110.a)

03 CHAPTER

Biostatistics

1. **Level of knowledge (good, average, poor) can be classified as:**

a) Nominal data
b) Numerical data
(c) Ordinal data
d) Discrete data
e) Significant data

2. **In case of normal distribution, proportion of observations that is present ±1 time the standard deviation from the mean:**

a) 58.27%
(b) 68.27%
c) 88.27%
d) 95.48%
e) 99.05%

3. **Out of following, which 'p' value is the most significant?**

(a) $p < 0.05$
b) $p < 0.1$
c) $p < 0.5$
d) $p < 1.0$
e) $p < 1.5$

Key:	1.c)	2.b)	3.a)

4. **Line diagrams are used to show:**
   a) Trend of events with passage of time
   b) Relationship between two variables
   c) Most commonly occurring values
   d) Frequency distribution
   e) Measures of dispersion

5. **Standard normal distribution curve is an important concept in statistical calculations. Which of the following statements about it is true?**
   a) Area under curve is 10
   b) It is an asymmetrical curve
   c) Its mean is 10
   d) Its standard deviation is +10
   e) Its mean, median, and mode coincide

6. **All are advantages of mailed questionnaire method of data collection, EXCEPT for:**
   a) It is simple
   b) It is cheap
   c) It has ahigh response rate
   d) Interviewer is not required
   e) It is economical

7. **Frequency distribution is the arrangement of the data:**
   a) Individually according to their magnitude
   b) In ascending order or descending order
   c) Into groups along with their frequencies
   d) It is the measurements according to their importance
   e) It is a pie chart

Key:	4.a)	5.e)	6.c)	7.c)

8. **The median of the data (1, 2, 4, 6, 8, 10, 11, and 13) is:**
   a) 4
   b) 6
   c) 7
   d) 8
   e) 10

9. **A line joining the mid points of histogram blocks is known as:**
   a) Bar diagram
   b) Frequency polygon
   c) Line diagram/graph
   d) Pie chart
   e) Pictogram

10. **Which of the following statements regarding Chi square test is true?**
    a) $\chi^2 = \frac{O-E}{E}$
    b) 2 x 2 contingency table can be used for this test
    c) Odds ratio is calculated
    d) It is used in descriptive studies
    e) It helps in finding the disease frequency

11. **'p' value:**
    a) Is the probability of committing a type-I or alpha error
    b) Is the probability of committing a type-II or beta error
    c) Is the value of probability sampling
    d) Signifies the sensitivity of the study
    e) Signifies the specificity of the study

Key:	8.c)	9.b)	10.b)	11.a)

12. According to normal distribution curve, the probability of a value falling outside the 95% confidence interval is:
   a) 1 in 10
   b) 1 in 20
   c) 1 in 30
   d) 1 in 40
   e) 1 in 50

13. Which of the following can be used for constructing a frequency polygon?
   a) Line diagram
   b) Normal distribution curve
   c) Component bar chart
   d) Scatter diagram
   e) Histogram

14. When dealing with categorical data; choose the appropriate formula for calculating the sample size by using relative precision:
   a) $n = \frac{z\,S^2}{L^2}$
   b) $n = \frac{pq}{L}$
   c) $n = \frac{z^2\,pq}{L^2}$
   d) $n = \frac{2\,pq}{SD^2}$
   e) $n = \frac{d^2}{pq}$

Key:	12.b)	13.e)	14.c)

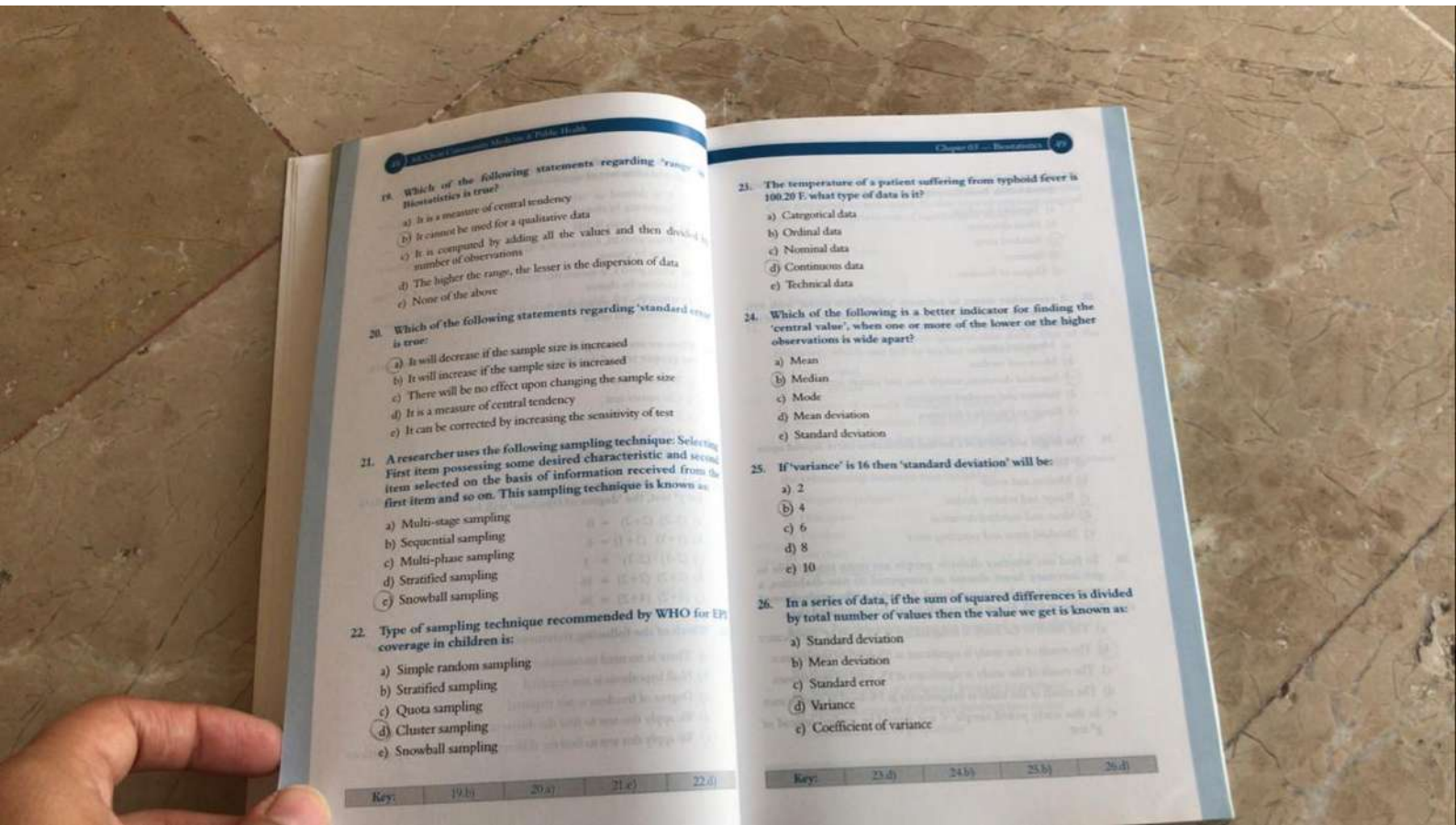
15. Which of the following statements regarding 'p' value, as calculated in test of significance, is true?
   a) It is defined as 'relative frequency of a particular event not happening by chance'
   b) It ranges from 0–100
   c) When p=0.05, it means that there is 5% possibility of an event to occur by chance
   d) When p=0.5, it means that there is 100% possibility of an event to occur by chance
   e) When P=1 it means that there is 100% probability that disease in question will occur

16. When we are dealing with a large sample size of nominal data, the proper test of significance would be:
   a) Wilcoxon test
   b) Chi square test
   c) T-test
   d) ANOVA
   e) Pearson correlation test

17. In 2 by 2 contingency table, when dealing with nominal data for χ^2 test, the 'degree of freedom' will be:
   a) (2–2) (2+2) = 0
   b) (1+1) (1+1) = 4
   c) (2–1) (2–1) = 1
   d) (2+2) (2+2) = 16
   e) (4+2) (4+2) = 36

18. Which of the folloeing statements regarding χ^2 test is true?
   a) There is no need to construct 2 x 2 contingency table
   b) Null hypothesis is not required
   c) Degree of freedom is not required
   d) We apply this test to find the difference between two means
   e) We apply this test to find the difference between two proportions

Key:	15.c)	16.b)	17.c)	18.e)



19. **Which of the following statements regarding 'range' in Biostatistics is true?**
a) It is a measure of central tendency
b) It cannot be used for a qualitative data
c) It is computed by adding all the values and then divided by number of observations
d) The higher the range, the lesser is the dispersion of data
e) None of the above

20. **Which of the following statements regarding 'standard error' is true:**
a) It will decrease if the sample size is increased
b) It will increase if the sample size is increased
c) There will be no effect upon changing the sample size
d) It is a measure of central tendency
e) It can be corrected by increasing the sensitivity of test

21. **A researcher uses the following sampling technique: Selecting first item possessing some desired characteristic and second item selected on the basis of information received from the first item and so on. This sampling technique is known as:**
a) Multi-stage sampling
b) Sequential sampling
c) Multi-phase sampling
d) Stratified sampling
e) Snowball sampling

22. **Type of sampling technique recommended by WHO for EPI coverage in children is:**
a) Simple random sampling
b) Stratified sampling
c) Quota sampling
d) Cluster sampling
e) Snowball sampling

Key:	19.b)	20.a)	21.e)	22.d)

23. **The temperature of a patient suffering from typhoid fever is 100.20 F, what type of data is it?**
a) Categorical data
b) Ordinal data
c) Nominal data
d) Continuous data
e) Technical data

24. **Which of the following is a better indicator for finding the 'central value', when one or more of the lower or the higher observations is wide apart?**
a) Mean
b) Median
c) Mode
d) Mean deviation
e) Standard deviation

25. **If 'variance' is 16 then 'standard deviation' will be:**
a) 2
b) 4
c) 6
d) 8
e) 10

26. **In a series of data, if the sum of squared differences is divided by total number of values then the value we get is known as:**
a) Standard deviation
b) Mean deviation
c) Standard error
d) Variance
e) Coefficient of variance

Key:	23.d)	24.b)	25.b)	26.d)

27. **The definition, 'an estimate of the degree to which sample mean varies from the population mean', refers to:**
a) Standard deviation
b) Mean deviation
c) Standard error
d) Variance
e) Degree of freedom

28. **A researcher wants to estimate 'population mean' with 95% confidence from sample mean. For this purpose, which of the following values are required?**
a) Mean and range
b) Mean and median
c) Standard deviation, sample size, and sample mean
d) Variance and standard deviation
e) Range and standard deviation

29. **The height and width of a normal distribution curve depend upon:**
a) Variance and coefficient of variance
b) Median and mode
c) Range and relative deviate
d) Mean and standard deviation
e) Standard error and sampling error

30. **To find out whether diabetic people are more susceptible to get coronary heart disease as compared to non-diabetics, a case control study was conduced. Analysis of the study showed 'p' value = 0.05. From this result it can be concluded that:**
a) The result of the study is insignificant at 5% level of significance
b) The result of the study is significant at 5% level of significance
c) The result of the study is significant at 1% level of significance
d) The result of the study is insignificant at 1% level of significance
e) In this study, paired sample 't' test should be applied instead of χ^2 test

Key:	27.c)	28.c)	29.d)	30.b)

31. **A case control study needs to be conducted to find out whether intravenous drug users are more at risk of getting hepatitis C as compared to non-users. In this type of epidemiological study, the appropriate test of significance would be:**
a) 't' test
b) Chi square (χ^2) test
c) ANOVA
d) Regression
e) Pearson's correlation

32. **A researcher of social sciences is interested to carry out a cross-sectional study on 'non quantifiable data'. Out of the following, which one will be his/her relevant topic?**
a) Census report
b) Public attitude
c) Prevalence of sexually transmitted diseases
d) Percentage of population living below poverty line
e) Contra-captive prevalence rate among eligible couples

33. **Out of the following, which is the best chart/diagram to assess the relationship between two variables?**
a) Frequency polygon
b) Histogram
c) Pie chart
d) Bar chart
e) Scatter diagram

34. **In statistical calculations, some time we are interested to estimate the value of one variable from the value of other variable that is known. For this purpose we are required to calculate:**
a) Correlation
b) Regression
c) Standard error of difference between proportions
d) Standard error of difference between two means
e) Standard error of proportion

Key:	31.b)	32.b)	33.e)	34.b)

35. **In descriptive studies for quantitative (numerical) data having mean and standard deviation, which of the following is the appropriate formula for sample size estimation?**

a) $n = \frac{z\,S^2}{L^2}$

b) $n = \frac{z^2}{L}$

c) $n = \frac{z^2\,PL}{L^2}$

d) $n = \frac{SD^2}{L^2}$

e) $n = \frac{z^2\,SD^2}{L^2}$

36. **The data of a study was as follows: Mode: 30, median: 40, and mean: 50. This data shows:**

a) Positive skewness
b) Negative skewness
c) Symmetrical distribution
d) Kurtosis
e) Bimodality

37. **Smoking leads to cancer. But the incidence of cancer is higher in middle age as compared to young age. In this statement, which one of the following is the confounding variable?**

a) Smoking
b) Cancer
c) Age
d) Incidence
e) Tar

Key:	35.e)	36.a)	37.c)

38. **In asymmetrical distribution, if mean is more than mode, it will lead to:**

a) Bimodal distribution
b) Integrated distribution
c) Elongated distribution
d) Positive skewness
e) Negative skewness

39. **A researcher finds that in a city 50% people have blood group 'B'; 35% have 'O' group; 10% have 'A' and 5% have 'AB' blood group. This type of data is best presented by:**

a) Line diagram
b) Histogram
c) Frequency polygon
d) Scatter diagram
e) Pie chart

40. **Standard error is an important calculation. To reduce this error, we should:**

a) Decrease the sample size
b) Increase the sample size
c) Take two different samples
d) Carry out longitudinal study
e) Carry out double-blind study

41. **A researcher carried out a study in which he/she took a sample and found the mean value of the sample. From this data, he/she wanted to find the the mean value of the population with 95% confidence. The calculation required for this purpose is:**

a) Variance
b) Coefficient of variance
c) Range
d) Standard deviation
e) Standard error

Key:	38.d)	39.e)	40.b)	41.e)

42. **A researcher is interested to find out how much individual observations are dispersed, on average, from mean of sample. The calculation required for this purpose is:**

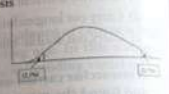
a) Variance
b) Coefficient of variance
c) Range
d) Standard deviation
e) Standard error

43. **Hospital statistics are considered a poor guide to the estimation of disease prevalence in a community because**

a) Geographical background of patient is not known
b) Denominator is not known
c) The period between disease and hospital admission is not known
d) The cost of hospital care is not known
e) Age and gender distribution of different diseases is not known

44. **In the normal distribution curve shown below, the area labelled are:**

a) Zone of acceptance of null hypothesis
b) Zone of rejection of null hypothesis
c) Zone of 'p' value
d) Zone of 'Z' value
e) Zone of bimodality



45. **A graph of the cumulative relative frequency distribution is known as:**

a) Ogive
b) Scatter diagram
c) Sector diagram
d) Pictogram
e) Spot map

Key:	42.d)	43.b)	44.b)	45.a)

46. **A study was conducted to find out whether there is any statistically significant difference between body mass index (BMI) of male students and female students of an MBBS class. The weight and height was determined and BMI calculated. What type of data was being used in this study?**

a) Nominal
b) Ordinal
c) Quantitative (Numerical)
d) Ordinary
e) Significant

47. **Random blood sugar level of 100 medical students was recorded. The mean sugar level was found to be 127mg/100ml. The standard deviation was 6. If the blood sugar level is normally distributed then, how many students will have blood sugar level above 133mg/100ml?**

a) 16
b) 24
c) 32
d) 68
e) 95

48. **In a surgical ward of a public hospital, two different types of antibiotics A and B were to be tested to find out their efficacy to prevent post-operative infection of the wound. For this purpose the patients who were to undergo surgery were divided into two equal groups i.e., group A and group B After surgery, during follow-up, it was found that the number of patients who developed infection in group A was 16, while in group B it was 9. To find out whether results are statistically significant, which test of significance is appropriate in this study?**

a) Analysis of variance
b) Correlation analysis
c) 't' test
d) Regression analysis
e) Chi square test

Key:	46.c)	47.a)	48.e)

49. In a cross-sectional study, the weights of 1000 people were noted; the mean weight was 60 kg. The standard deviation was 2. If the data is normally distributed, what percentage of people will lie between the range of 56–64 kg?
a) 68%
b) 85%
c) 95%
d) 97%
e) 99.7%

50. An investigator wants to test the efficacy of a new vaccine for the prevention of a disease. He/she sets the level of significance at 0.05. Sample size is 30. The appropriate test of significance in this situation will be:
a) ANOVA
b) 't' test
c) Pearson's correlation test
d) Fisher's exact test
e) Regression analysis

51. A researcher wants to have 95% confidence level for the results of his/her study. Which one of the following formulae will help him to reach this conclusion?
a) Mode ±2 SD
b) Mean ±2 SE
c) Mean ± SE
d) $\sigma/\sqrt{n}$
e) Mean $\pm\sigma/\sqrt{n}$

52. Fasting blood sugar level of 100 people was recorded. The result was as follows: Mean sugar level: 95 mg/dl and standard deviation: 10. The standard error in this study will be:
a) 1
b) 2
c) 3
d) 4
e) 5

Key:	49.c)	50.d)	51.b)	52.a)

53. A study was conducted to find whether there is significant difference of mean weight of children of rural area and urban area. One hundred and fifty children from rural area and 175 children from urban area were randomly selected. The appropriate test of significance in this situation will be:
a) Pearson's correlation test
b) 't' test
c) Fisher's exact test
d) χ^2 test (Chi square test)
e) Analysis of variance

54. An epidemiologist was dealing with nominal data. The sample size was 300. The appropriate 'test of significance' in this situation would be:
a) 't' test
b) ANOVA
c) χ^2 test
d) Pearson's correlation test
e) Temporal association test

55. An epidemiologist wants to find out whether there is statistically significant difference between two means. The appropriate 'test of significance' in this situation would be:
a) 't' test
b) ANOVA
c) χ^2 test
d) Pearson's correlation test
e) Temporal association test

Key:	53.b)	54.c)	55.a)

56. The calculated Chi square value from a 2x2 contingency table is 5.7 and χ^2 table value (at $p=0.05$) is 3.84. The conclusion drawn from this is that:

a) The result is not significant
b) The result is significant
c) Regression analysis should be applied
d) 't' test should be applied
e) The data is insufficient to reach any conclusion

57. The mean fasting blood cholesterol level of 1000 subjects was 150 mg/dl and the standard deviation was 2. If the data was normally distributed, what will be the range of blood cholesterol level for 95% of subjects?

a) 130–160
b) 120–160
c) 148–152
d) 146–154
e) 150–156

58. A study was conducted to find out whether there is any difference between body mass index (BMI) of male students and female students of a MBBS class. The weight and height was determined and BMI calculated. What test of significance will be appropriate in this study?

a) Chi square test
b) T-test
c) Pearson's correlation coefficient test
d) Spearman's rho test
e) Analysis of variance

Key:	56 b)	57 d)	58 b)

59. A survey conducted in a village revealed that 10% of under 5-year-old children were not fully immunized. This result was to be presented in the pie chart. For this purpose, with which of the following should 10% be multiplied to get equivalent degrees to make an appropriate sector of a pie chart?

a) 1.5
b) 2.6
c) 3.6
d) 4.2
e) 4.8

60. A study was conducted to find out the distribution of blood groups among the donors from different socio-economic status and different genders. The data was compiled in percentage. Which one of the following is appropriate for presenting this type of data?

a) Histogram
b) Pictogram
c) Map
d) Pie chart
e) Line diagram

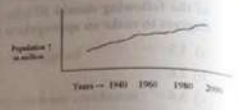
61. A paediatrician while studying the nutritional status of children upto 5 years of age in a peri-urban community found that coefficient of correlation i.e. 'r' between height and weight of children was +1. It indicates that the association between height and weight is:

a) Strong positive
b) Weak positive
c) Strong negative
d) Weak negative
e) Insignificant

Key:	59 c)	60 d)	61 a)

62. **Population of a country was recorded in a graph as given below. This type of presentation of data is known as:**

a) Bar chart
b) Line graph
c) Stem and leaf plot
d) Frequency polygon
e) Histogram



63. **A child had maculo-popular rash. He was diagnosed as a case of measles. What type of variable is this rash?**

a) Quantitative
b) Nominal
c) Continuous
d) Ordinal
e) Normal

64. **Weights of male and female new-borns were recorded as follows:**

Gender	Number	Mean weight in kg	SD
Male	68	3.9	2
Female	87	3.1	4

To find if the difference in mean weight is statistically significant or not, what test of significance is appropriate?

a) Paired sample t-test
b) Independent sample t-test
c) Chi square test
d) Pearson's correlation test
e) ANOVA

Key:	62.b)	63.b)	64.b)

65. **To test whether a new drug increases the weights of children or not, 24 children were divided into two groups: 12 children as 'experimental group' who were given the drug, and 12 children as 'control group' who did not receive the drug. What will be the 'degree of freedom' the in analysis of this study?**

a) 8
b) 12
c) 14
d) 18
e) 22

66. **Which one of the following variables is classified as categorical data?**

a) Weight in kilograms
b) Blood sugar level in milligram/deciliter
c) Number of patients
d) Blood pressure
e) Gender

67. **A researcher is dealing with nominal data and sample size is small (<40). What test of significance will be appropriate in this situation?**

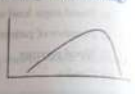
a) Wilcoxon test
b) χ^2 test (Chi square test)
c) T-test
d) Fisher's exact test
e) Pearson's correlation test

Key:	65.c)	66.e)	67.d)

68. **A researcher concluded that the mean height of a sample of women from a rural population was 150 to 160 cm with 95% confidence. It means that the researcher is:**

a) 5% certain that mean height of study population of women is between 150 to 160 cm
b) 25% certain that mean height of study population of women is between 150 to 160 cm
c) 50% certain that mean height of study population of women is between 150 to 160 cm
(d) 95% certain that mean height of study population of women is between 150 to 160 cm
e) 100% certain that mean height of study population of women is between 150 to 160 cm

69. **Which type of distribution is the following curve showing?**



a) Normal distribution
b) Positively skewed distribution
(c) Negatively skewed distribution
d) Variable distribution
e) Scattered distribution

70. **If the data is presented in a curve form, the peak of the curve will represent:**

a) Mean
(b) Mode
c) Median
d) Standard error
e) Standard deviation

Key:	68.d)	69.c)	70.b)

71. **Nutrition status of a group of school children was estimated by weighing. The result was as follow:**

Severely underweight:	40
Underweight:	36
Normal weight:	120
Over weight:	10
Total:	206

Which type of data is this?

a) Nominal
(b) Ordinal
c) Numerical
d) Continuous
e) Dichotomous

Key	71.b)

04 CHAPTER

Demography

1. **In age pyramid of a developed country, the population of the female is represented at the:**
   a) Base
   b) Left side
   c) Right side
   d) Top
   e) Center

2. **The formula for 'general fertility rate' is:**
   a. $\frac{\text{Number of total births (live and dead) in a year}}{\text{Total number of females}}$
   b. $\frac{\text{Number of women aged 15–49 years}}{\text{Number of live births in a year}} \times 1000$
   c. $\frac{\text{Number of live births in a year}}{\text{Mid-year female population aged 15–49 year}} \times 1000$
   d. $\frac{\text{Number of live births in a year}}{\text{Mid-year population}} \times 1000$
   e. $\frac{\text{Number of total births in a year}}{\text{Mid-year population}}$

Key:	1.c)	2.c)

3. **Causes of high fertility are:**
   a) Psychological
   b) Social
   c) Economic
   d) Demographic
   e) All of above

4. **According to 1998 census of Pakistan, the growth rate was:**
   a) 1.8%
   b) 2.0%
   c) 2.3%
   d) 2.5%
   e) 2.6%

5. **In a town the birth rate is 20/1000 and death rate is 10/1000. The growth rate will be:**
   a) 1%
   b) 2%
   c) 3%
   d) 4%
   e) 5%

6. **Which of the following statements regarding replacement level of fertility, is not true?**
   a) It is also known as: zero population growth
   b) When a couple has two births during their reproductive life
   c) At a community scale, the replacement level is considered when there are on average, 2 births per woman
   d) The population will not increase
   e) To achieve replacement level of fertility, there should be over 60% Couple Protection Rate (CPR) in the community

Key:	3.e)	4.e)	5.b)	6.c)

7. **If the annual growth rate of a country is 2%, then the number of years required for the population to become double in size will be:**
   a) 15
   b) 20
   c) 25
   d) 30
   e) 35

8. **The total number of people in a completed family can be estimated from:**
   a) Net reproduction rate
   b) Gross reproduction rate
   c) Total fertility rate
   d) Contraception prevalence rate
   e) Eligible couple rate

9. **During census of a country, 'literacy rate' was to be determined. The officials should include what age group of people?**
   a) At birth to 40 years
   b) From 4 years onward
   c) From 7 years onward
   d) From 15 years onward
   e) Total population

10. **The definition, 'number of daughters a newborn girl will bear during her lifetime assuming fixed age-specific fertility and mortality rate' refers to:**
    a) General fertility rate
    b) Net fertility rate
    c) Gross reproduction rate
    d) Net reproduction rate
    e) Total fertility rate

Key:	7.e)	8.c)	9.c)	10.d)

11. **Which of the following statements regarding de facto ... is true?**
a) It is the only method used in Pakistan
b) Person is counted at his/her actual residence
c) It is defective census
d) It counts only male population
e) Person is counted where he or she is present on the day of counting

12. **Which rate does the given formula represent?**
$$\frac{\text{Number of live births in a particular age group}}{\text{Mid-year female population of the same age group}} \times 1,000$$
a) Crude birth rate
b) Age specific fertility rate
c) Total fertility rate
d) General fertility rate
e) Gross reproduction rate

13. **In a country where population is mostly young, there is tendency for the population growth to continue beyond the time when replacement level of fertility has been achieved. It is due to:**
a) Insufficient use of contraception
b) Decrease in mortality rate
c) The fact that the population comprises many future mothers
d) Low literacy standards in females
e) Poor socio-economic conditions

Key:	11.c)	12.b)	13.c)

14. **In a country the Net Reproduction Rate (NRR) is equivalent to 1. If there is no net migration then the population of that country will:**
a) Increase by 1% per year
b) Increase by 2% per year
c) Neither increase nor decrease
d) Decrease by 1% per year
e) Decrease by 2% per year

15. **Out of following, which one represents the formula of 'Dependency Ratio'?**
a. $D.R. = \frac{Pop.\ <15+\geq 60\,y}{Pop.\ 15\text{—}60\,y} \times 100$
b. $D.R. = \frac{Pop.\ <15+\geq 65y}{Pop.\ 15\text{-}64y}$
c. $D.R. = \frac{Pop.\ <15+\geq 65y}{Pop.\ 15\text{—}64\,y} \times 100$
d. $D.R. = \frac{Pop.\ <15+\geq 65y}{Pop.\ 15\text{—}64\,y} \times 1000$
e. $D.R. = \frac{Pop.\ <20+\geq 60y}{Pop.\ 20\text{—}60\,y} \times 100$

16. **According to the demographic data of a city, the annual growth rate was 2%. Assuming that there is no net migration and this growth rate remains constant, then in how many years the population of that city will become double?**
a) 20 years
b) 25 years
c) 30 years
d) 35 years
e) 40 years

Key:	14.c)	15.c)	16.d)

17. **If we draw a curve showing world population growth from year 1750 to projected 2020, we will get a curve that will be:**
   a) Smooth, symmetrical and bell-shaped
   b) Right skewed
   c) Left skewed
   d) J-shaped
   e) Bimodal

18. **In a demographic survey of a community the 'vital index' was found to be 100. It means that population of that community is:**
   a) Stable
   b) Increasing at a fast rate
   c) Increasing at a slow rate
   d) Decreasing at a fast rate
   e) Decreasing at a slow rate

19. **In a demographic study of a country the 'net reproduction rate' was found to be 0.7. Following conclusioncan be drawn from this:**
   a) The reproductive performance of the population is below the replacement level
   b) The population will grow rapidly
   c) The population will grow slowly
   d) The population will neither increase nor decrease
   e) Nothing can be concluded regarding population change

20. **An expert of social sciences wants to find out the 'dependency ratio' of a country. The data required for this purpose would be:**
   a) Age-wise distribution of the population
   b) Gender-wise distribution of the population
   c) Economic status
   d) Literacy standard
   e) Per capita income

Key:	17.d)	18.a)	19.a)	20.a)

21. **To achieve 'replacement level of fertility' or 'zero population growth', the couple protection rate (contraceptive prevalence rate) should exceed:**
   a) 90%
   b) 80%
   c) 70%
   d) 60%
   e) 50%

22. **The population of a town is 30,000. The crude birth rate is 10/1,000 and crude death rate is 8/1,000. What will be the annual requirement of BCG doses in that town?**
   a) 100
   b) 200
   c) 300
   d) 400
   e) 500

23. **A demographic expert wants to know the impact of family planning services in a community. Out of following, the sensitive indicator for this purpose would be:**
   a) Birth rate
   b) General fertility rate
   c) Age-specific fertility rate
   d) Gross reproduction rate
   e) Abortion rate

24. **One of the keys identified by the United Nations for controlling population growth is:**
   a) Elimination of abortion
   b) Decentralization of cities
   c) Empowering women
   d) The reduction of technological change
   e) Intersectoral coordination

Key:	21.d)	22.c)	23.c)	24.c)

25. **Out of the following, choose the best option regarding 'expectation of life' in developed countries.**
   a) It is higher in male
   b) It is higher in female
   c) It is equal in both the sexes
   d) It is stationary
   e) It is decreasing

26. **In demographic cycle, 'late expanding stage' is characterized by**
   a) High birth rate and high death rate
   b) High birth rate and declining death rate
   c) Declining birth rate and declining death rate
   d) Low birth rate and low death rate
   e) Birth rate which is lower than death rate

27. **Age and gender composition of the population of a country is best presented by:**
   a) Line diagram
   b) Pie chart
   c) Pictogram
   d) Map
   e) Population pyramid

28. **Which of the following indicators is included in demography?**
   a) Incidence of disease
   b) Prevalence of disease
   c) Case fatality rate
   d) Mortality rate
   e) Natural history of disease

Key:	25.b)	26.e)	27.e)	28.d)

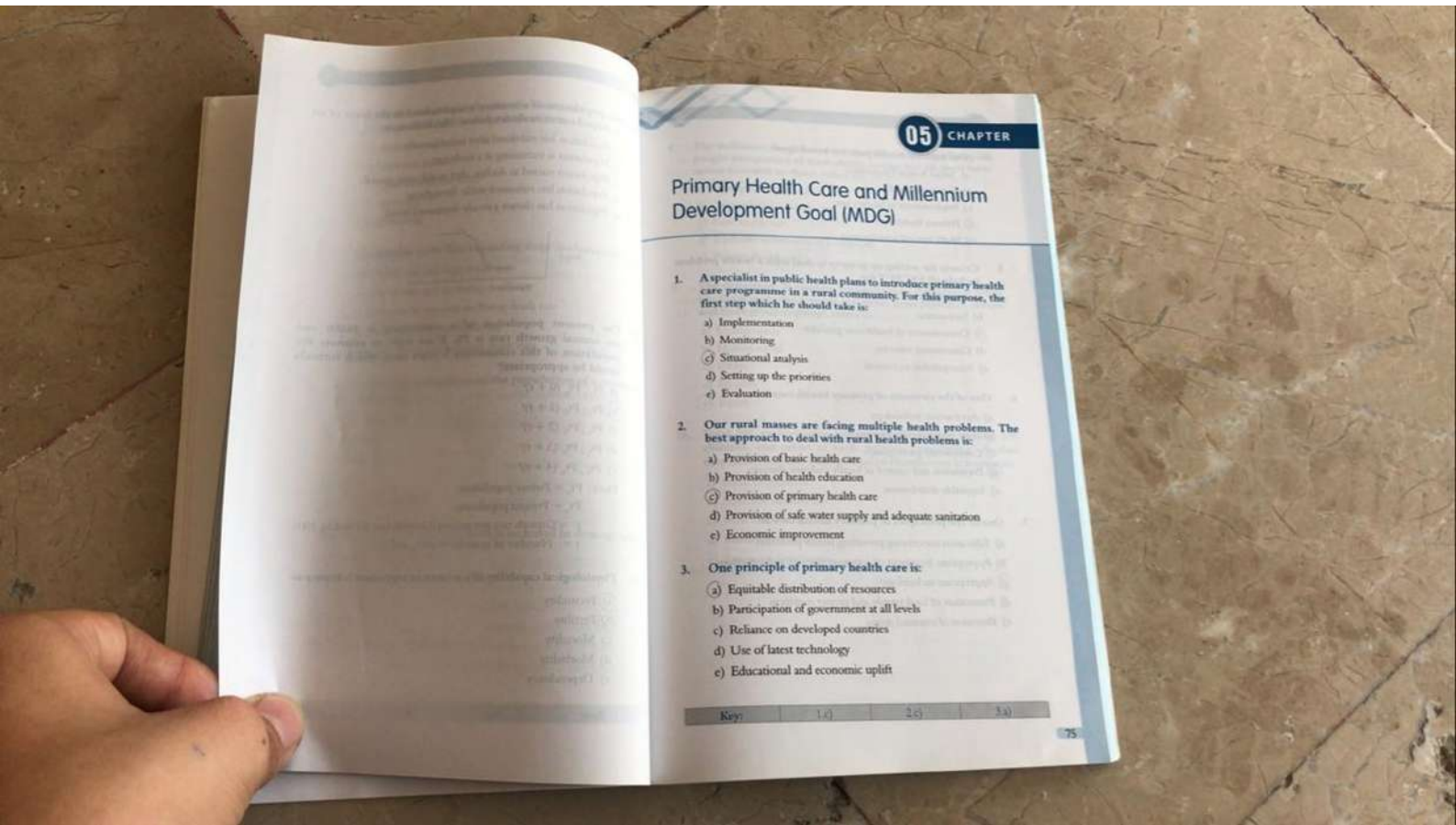
29. **The population of a country was presented in the form of an 'S' shaped curve as shown below. This indicates:**
   a) Population has stabilized after initial growth
   b) Population is increasing at a steady rate
   c) Population started to decline after initial rapid growth
   d) Population has remained stable throughout
   e) Population has shown a steady downward trend

30. **The present population of a community is 35,000 and the annual growth rate is 2%. If we want to estimate the population of this community 5 years later, which formula would be appropriate?**
   a) $Pt_t = Pt_0 (0 + r)^t$
   b) $Pt_t = Pt_0 (1 + r)^t$
   c) $Pt_t = Pt_0 (2 + r)^t$
   d) $Pt_t = Pt_0 (3 + r)^t$
   e) $Pt_t = Pt_0 (4 + r)^t$

   Here: Pt_t = Future population
   Pt_0 = Present population
   r = Growth rate per person (Growth rate divided by 100)
   t = Number of years between t_0 and t_t

31. **Physiological capability of a woman to reproduce is known as:**
   a) Fecundity
   b) Fertility
   c) Mortality
   d) Morbidity
   e) Dependency

Key:	29.a)	30.b)	31.a)



05 CHAPTER

Primary Health Care and Millennium Development Goal (MDG)

1. **A specialist in public health plans to introduce primary health care programme in a rural community. For this purpose, the first step which he should take is:**
   a) Implementation
   b) Monitoring
   c) Situational analysis
   d) Setting up the priorities
   e) Evaluation

2. **Our rural masses are facing multiple health problems. The best approach to deal with rural health problems is:**
   a) Provision of basic health care
   b) Provision of health education
   c) Provision of primary health care
   d) Provision of safe water supply and adequate sanitation
   e) Economic improvement

3. **One principle of primary health care is:**
   a) Equitable distribution of resources
   b) Participation of government at all levels
   c) Reliance on developed countries
   d) Use of latest technology
   e) Educational and economic uplift

Key:	1.c)	2.c)	3.a)

4. **Our national health policy is based upon:**
   a) Social Action Programme
   b) Economic uplift
   c) Improvement in literacy rate
   (d) Primary health care
   e) Multi sectoral coordination

5. **Criteria for setting up priority to deal with a health problem include all EXCEPT for:**
   a) Prevalence
   b) Seriousness
   (c) Commitment of health care provider
   d) Community concern
   e) Susceptibility to control

6. **One of the elements of primary health care is:**
   a) Appropriate technology
   b) Inter-sectoral coordination
   c) Community participation
   (d) Prevention and control of locally endemic diseases
   e) Equitable distribution

7. **One of the principles of primary health care is:**
   a) Education concerning prevailing health problems
   b) Appropriate treatment of common diseases and infections
   (c) Appropriate technology
   d) Promotion of food supply and proper nutrition
   e) Provision of essential drugs

Key:	4.d)	5.c)	6.d)	7.c)

8. **The definition, 'health services must be shared equally by all people irrespective of their ability to pay and all must have access to health services', refers to:**
   a) Appropriate health care
   b) Comprehensive health care
   c) Basic health care
   (d) Equitable distribution of health care
   e) Primary health care

9. **The definition, 'It requires recognition of differential needs i.e., the way in which needs can differ from person to person and from groupto group', refers to:**
   a) Unmet needs
   b) Human rights
   c) Utility
   d) Equality
   (e) Equity

10. **Total 100 multivitamin tablets are distributed among 100 children, one tablet to each, without considering whether they need it or not. This method of distribution is known as:**
    (a) Equal distribution
    b) Equitable distribution
    c) Mass distribution
    d) Blanket distribution
    e) Extensive distribution

Key:	8.d)	9.e)	10.a)

11. A health planner wants to introduce primary health care in a remote backward population. For this purpose, the first step is community assessment which include exploration of following, EXCEPT:
   a) Prioritization of health problem
   b) Social, cultural and political factors
   c) Health services assessment
   d) Demographic profile of the community
   e) Identification of felt needs of the community

12. Many developing countries find it difficult to implement comprehensive primary health care, so selective primary health care is suggested. One of the the component of this selective primary health care approach is:
   a) Provision of essential drugs
   b) Promotion of breast-feeding
   c) Tuberculosis control programme through dots
   d) Prevention and control of locally endemic diseases
   e) Care of the elderly

13. Millennium Development Goal (MDG) Programme was approved in year:
   a) 1990
   b) 1995
   c) 2000
   d) 2005
   e) 2010

14. In 'Millennium Development Goals' There are eight health related goals. Which one of the following is included in it as a goal?
   a) Promotion of gender equality
   b) Prevention of deforestation
   c) Equal distribution of water resources
   d) Care of the elderly
   e) Promotion of mental health

Key:	11.a)	12.b)	13.c)	14.a)

15. It is realized that to achieve comprehensive health care by all the people, there should be coordination of health sector with other sectors like agriculture, education, housing, industry and communication. This is known as:
   a) Comprehensive health care
   b) Socio-economic coordination
   c) Health for all
   d) Inter-sectoral coordination
   e) Millennium Development Goal

16. The definition' 'Attainment of a level of health that will enable every individual to lead a socially and economically productive life', refers to:
   a) Primary health care
   b) Millennium Development Goals
   c) Comprehensive health care
   d) Cooperative assistance and relief everywhere
   e) Health for all

17. Women who are fecund (productive) and sexually active but are not using any method of contraception although they do not want more children, or they want to delay the birth of next child. This situation is known as:
   a) Lack of antenatal care
   b) Unmet need of family planning
   c) Social injustice
   d) Gender bias
   e) Poor contraception rate

Key:	15.d)	16.e)	17.b)

06 CHAPTER

Health Management Information System (HMIS)

1. **The definition, 'The system which provides an organized method of collecting data and assimilating it into information to be used for management and decision making', refers to:**
   a) Feedback
   b) Management Information System
   c) System Analysis
   d) Planning Cycle
   e) Filtration of information

2. **A poliomyelitis case is reported in a primary health care facility. Which of the following forms should the doctor in-charge should use to report this case to higher authorities?**
   a) FF–3 form
   b) FF–2 form
   c) FF–1 form
   d) Consolidated reporting form
   e) Epidemic register

Key:	1.b)	2.c)

3. To assess whether a health programme like primary health care is running properly, day-to-day overseeing or checking is carried out. This activity is known as:
   a) Monitoring
   b) Evaluation
   c) Impact indicator
   d) Feedback
   e) System analysis

4. The prime function of management information system is:
   a) Disease control
   b) Health promotion
   c) Reporting
   d) Decision making
   e) Monitoring and evaluation

5. One of the requirements of an ideal health indicator is that the results of the indicator should be same if measured by different people in similar circumstances. This criterion is known as:
   a) Reliability
   b) Accuracy
   c) Validity
   d) Specificity
   e) Feasibility

6. A well-designed management information system takes into account the following, EXCEPT for:
   a) Relevance
   b) Standardization
   c) Data collecting and aggregating instrument
   d) Data presentation
   e) A well-equipped laboratory

Key:	3.a)	4.e)	5.a)	6.e)

7. The health indicator which measures the effectiveness of the programme is called:
   a) Valid indicator
   b) Reliable indicator
   c) Impact indicator
   d) Output indicator
   e) Final indicator

8. A patient was suffering from a complicated disease which cannot be treated at a rural health centre. Which referral form should be used in this case?
   a) FF-1
   b) FF-2
   c) FF-3
   d) FF-4
   e) None of above

Key:	7.c)	8.a)

07 CHAPTER

Rural and Urban Health

1. **All of the following statements regarding basic health units are true EXCEPT for:**
   a) It serves 5000–10,000 population
   b) It provides promotive, preventive, and curative services
   c) It acts as first-level care facility
   d) There is laboratory for routine blood and urine examination
   (e) There is X-ray facility

2. **In a rural house, the built up area should not be more than:**
   a) 1/2 of total area
   (b) 1/3 of total area
   c) 1/4 of total area
   d) 1/5 of total area
   e) 1/6 of total area

3. **First Level Care Facility (FLCF) include:**
   a) Basic health unit
   b) Rural health centre
   c) Out-patient department of a district head quarter hospital
   d) Out-patient department of teaching hospital
   (e) All of above

Key:	1.e)	2.b)	3.e)

4. **Which of the following statements regarding a First Level Care Facility (FLCF) is true?**
   a) It is a place where only curative services are provided
   b) Only basic health units act as a FLCF
   c) Only tehsil head quarter hospitals act as a FLCF
   d) It is a place where patients are referred to for the first time
   e) It is a place where first contact of the patient with health care provider takes place

5. **Which of the following statements regarding a Rural Health Center (RHC) is true?**
   a) It serves a population of about 5000-10,000 people
   b) Staff consists of two doctors, one male and one female
   c) There is no indoor facility
   d) Medico-legal reporting is done here
   e) There is an eye specialist available

6. **Which of the following is not a sign of a healthy city?**
   a) Different organizations work in partnership
   b) It provides entertainment and leisure activities
   c) It provides durable supplies of food, water, energy, and efficient waste-disposal
   d) In it people live longer in good health and suffer less from diseases
   e) It is safe from natural disasters like earthquakes and floods, etc

Key: .	4.c)	5.d)	6.e)

7. **Which of the following statements regarding a Basic Health Unit (BHU) is correct?**
   a) Sanctioned staff includes two male and one female medical officer
   b) The simple tests like routine blood and urine examinations are sent to rural health centres
   c) There is a small operation theatre
   d) Essential drugs should be available
   e) There are no residences for medical officers

8. **Which of the following statements regarding a Rural Health Center (RHC) is true?**
   a) It serves a population of about 10,000- 20,000 people
   b) Total number of doctors employed is: two, i.e. one male medical officer and one female medical officer
   c) There are 100 RHCs in Pakistan
   d) There are no indoor facilities
   e) There is X-ray facility available

9. **Which one of the following statements regarding an urban squatters or 'katchi abadi' is true?**
   a) Health care is seen as priority
   b) They have stopped growing in developing world
   c) The population constitutes nearly 10% of the total urban population
   d) Only those strategies that recognise values and build upon the complex social system that exist in settlements, have any chance to succeed
   e) Income generating activities are not welcome and acceptable

Key:	7.d)	8.e)	9.d)

10. **The rural population of Pakistan comprises about two third of total population and they are more in need of heath facilities, but the majority of the health services are located in urban areas. This is known as:**

a) Ineffective distribution of health facilities
b) Inequitable distribution of health facilities
c) Urban bias
d) Rural bias
e) Social injustice

11. **In a rural population there is high prevalence of anaemia due to hook worm infestation. Out of following options, which one is the most appropriate to control this health problem?**

a) Do not take unhygienic food
b) Use boiled water
c) Use mosquito nets treated with insecticide
d) Have vaccination against hook worm
e) Do not move bare footed in fields and other places

12. **Which of the following statements regarding a rural health center (RHC) is true?**

a) Each RHC serves a population of about 500,000 people
b) There are both in-patient and out-patient departments
c) Sanctioned staff includes 2 MBBS doctors
d) RHCs act as secondary level of health care
e) There are no referral services available

13. **The major cause of air pollution in cities is/are:**

a) Cooking
b) Automobiles
c) Domestic animals
d) Air conditioners
e) Respiration

Key:	10.b)	11.e)	12.b)	13.b)

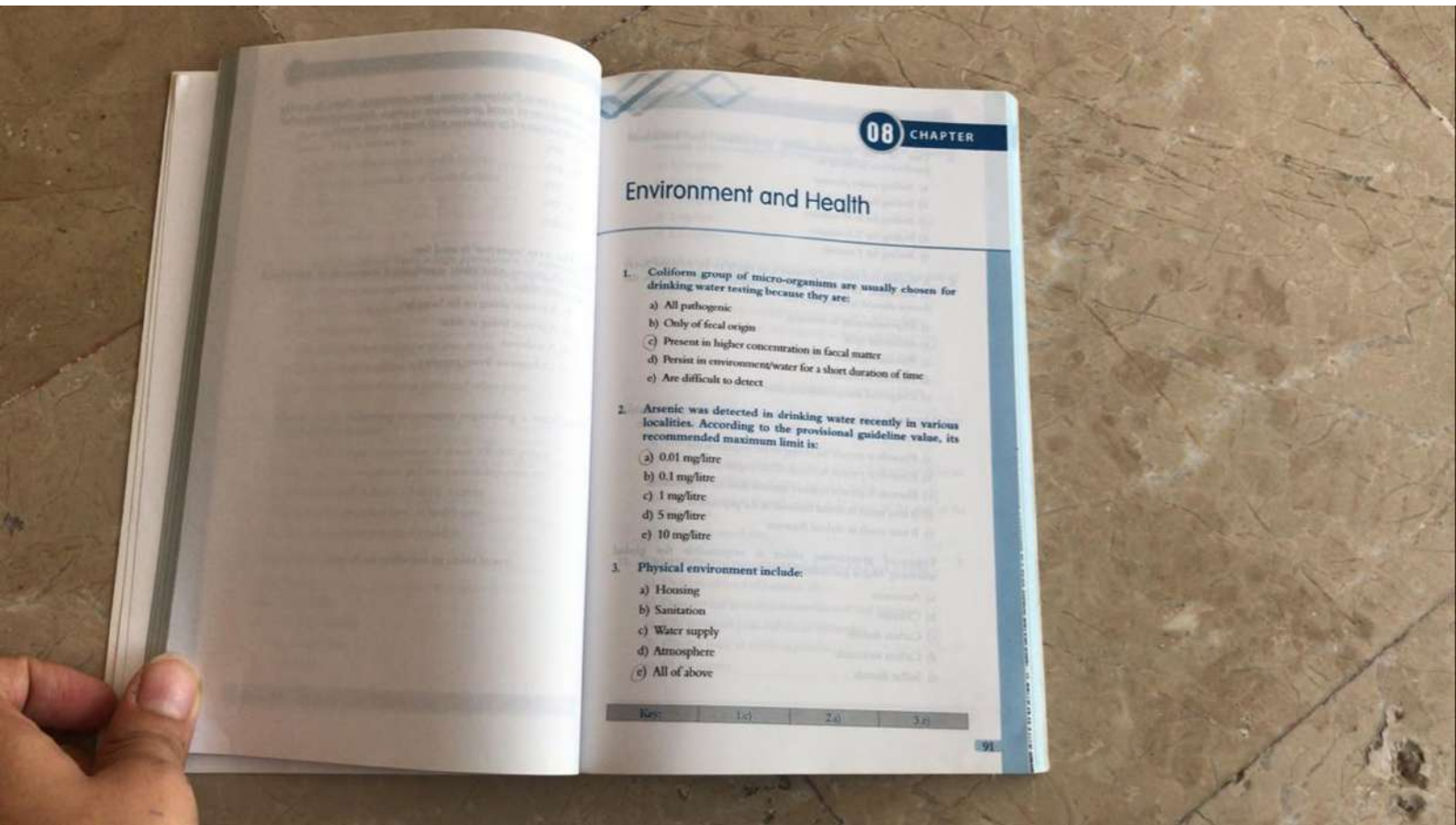
14. **Ever since Pakistan came into existence, there is steady migration of rural population to cities. Approximately what percentage of population still lives in rural areas?**

a) 20%
b) 30%
c) 50%
d) 70%
e) 80%

15. **The term 'squatter' is used for:**

a) A person who takes unauthorized possession of unoccupied premises
b) A person sitting on his haunches
c) A person living in slum
d) A widower
e) Unhygienic living premises

Kcly	14.d)	15.a)



08 CHAPTER

Environment and Health

1. **Coliforms group of micro-organisms are usually chosen for drinking water testing because they are:**
   a) All pathogenic
   b) Only of fecal origin
   c) Present in higher concentration in faecal matter
   d) Persist in environment/water for a short duration of time
   e) Are difficult to detect

2. **Arsenic was detected in drinking water recently in various localities. According to the provisional guideline value, its recommended maximum limit is:**
   a) 0.01 mg/litre
   b) 0.1 mg/litre
   c) 1 mg/litre
   d) 5 mg/litre
   e) 10 mg/litre

3. **Physical environment include:**
   a) Housing
   b) Sanitation
   c) Water supply
   d) Atmosphere
   e) All of above

Key:	1.(c)	2.(a)	3.(e)

4. **One of the recommended procedures for household purification of water is:**
   a) Boiling under pressure
   b) Boiling for half an hour
   c) Boiling for 5–10 minutes
   d) Boiling for 2–3 minutes
   e) Boiling for 1 minute

5. **A 30-year-old married woman was likely to be advised X-ray of abdomen. To prevent radiation hazard in this woman, the doctor should take history of:**
   a) Hypersensitivity to radiation
   b) Menstrual cycle
   c) Previous exposure to X-ray
   d) Previous abortions
   e) Congenital abnormalities in other children

6. **The chemical analysis of a community water supply analysis revealed presence of fluoride: 0 .03 ppm. This means that:**
   a) Fluoride is present according to the requirements
   b) Fluoride is present in excess of the requirements
   c) Fluoride is present in lesser amount than the requirement
   d) It may result in dental fluorosis in the population
   e) It may result in skeletal fluorosis

7. **Enhanced greenhouse effect is responsible for global warming. Major gas contributing to it is:**
   a) Ammonia
   b) Chlorine
   c) Carbon dioxide
   d) Carbon monoxide
   e) Sulfur dioxide

Key:	4.c)	5.b)	6.c)	7.c)

8. **During chlorination of water, the recommended required amount of free/residual chlorine in water is:**
   a) 0.5 mg/litre
   b) 1 mg/litre
   c) 1.5 mg/litre
   d) 2 mg/litre
   e) 2.5 mg/litre

9. **Rapid sand filter is an important method of purification of surface water. Which of the following statements regarding a rapidsand filter is true?**
   a) Alum is used for coagulation at the rate of 5–40 mg/litre
   b) It is easier to operate, as compared to slow sand filters
   c) The 'vital layer' is formed just above the fine sand layer
   d) When blocked, the back washing is not necessary
   e) Large area is required is as compared to slow sand filters

10. **Which of the following statements regarding slowsand filters for water purification is true?**
    a) Only mechanical straining takes place
    b) The size of sand particles in filter is 0.15 to 0.35 mm in diameter
    c) The rate of filtration of water is 2–4 $m^3/m^2/h$
    d) The vital layer is formed within 6–12 hours of the start of the filteration
    e) It occupies small area

11. **Chlorination of water in usual doses of 0.2 to 0.5 PPM:**
    a) Destroys all forms of bacterial life
    b) Does not kill virus of poliomyelitis and viral hepatitis
    c) Kills protozoal cysts and ova of helminthes
    d) Kills the spore of micro-organisms
    e) All are correct

Key:	8.a)	9.a)	10.b)	11.b)

12. **The minimum distance between the pit/dug well latrines and the source of under ground water supply should be:**
   a) 15 metres
   b) 25 metres
   c) 35 metres
   d) 45 metres
   e) 50 metres

13. **Total Dissolved Solids (TDS) in drinking water, should not be more than:**
   a) 100–200 PPM
   b) 200–300 PPM
   c) 600–1000 PPM
   d) 1500–2000 PPM
   e) 2000–2500 PPM

14. **Which of the following statements regarding rain water in its original form is true?**
   a) It is hard water
   b) It cannot be used as source of drinking water
   c) It should be stored in metal container
   d) Normally its PH is slightly acidic
   e) All are correct

15. **Chlorination of water, is more effective, if the PH of water is:**
   a) 9 to 10
   b) 8.5 to 9.0
   c) 8.0 to 8.5
   d) 7.5 to 8.0
   e) 7 to 7.5

Key:	12.a)	13.c)	14.d)	15.e)

16. **Freshly prepared bleaching powder has:**
   a) 15% available chlorine
   b) 20% available chlorine
   c) 25% available chlorine
   d) 30% available chlorine
   e) 33% available chlorine

17. **It is known that the deep wells are a better source of water supply than shallow wells. Which of the following statements regarding a deep well is true?**
   a) It taps the water above the first impervious layer
   b) Its water is as soft as rainwater
   c) It is usually free from pathogenic micro-organisms
   d) Water yield is less than shallow wells
   e) All of the above statements are true

18. **Which of the following statements regarding bacteriological quality of safe drinking water as approved by WHO is true?**
   a) No sample should have E.coli in 100 ml
   b) No sample should have more than 3 Coliform per 100 ml
   c) Not more than 5% of samples throughout the year should have Coliform in 100 ml
   d) Not two consecutive samples should have Coliform in 100 ml
   e) All of the above statements are correct

19. **World summit in Johannesburg (South Africa) in year 2000 has recommended for 'sustainable development'. It means to develop the industry in such a way that:**
   a) All the waste products can be recycled
   b) It causes environmental pollution on a small scale
   c) It enhances the biodiversity of life
   d) The pollution it causes can be absorbed/removed by earth's biosphere
   e) All the hazardous waste producing factories should be banned

Key:	16.e)	17.c)	18.e)	19.d)

20. **The first step of purification of surface water, while using slow sand filter, is storage for 14 days. This may result in:**
a) Increase in turbidity
b) Anaerobic oxidation of organic matter present in water
c) Reduction of about 90% of pathogenic micro-organism
d) Only physical purification of the water
e) Only chemical purification of the water

21. **Presence of which of the following in drinking water may give rise to complaints by the consumer on physical examination?**
a) Arsenic in concentration of 1–2 mg/litre
b) Chloride in the range of 200–400 ppm
c) High turbidity
d) Coliform high concentration
e) All of the above

22. **Which of the following statements regarding shallow wells is correct?**
a) Its water is usually safer than deep wells
b) It taps the water between the first and second impervious layers
c) There should be no source of contamination within 15 metres of the well
d) The yield of water is more than deep wells
e) The water present in it comes from deep wells

23. **Which of the following statements regarding bacteriological examination of water is correct?**
a) In colony count method, viable bacteria are detected
b) Staphylococci are usually detected in water sample
c) The examination can be done within 7 days of collecting the water sample
d) The water sample from the tap should be taken immediately on opening the tap
e) Presence of chlorine will not affect the result

Key:	20.c)	21.c)	22.c)	23.a)

24. **A chemical analysis report of water shows nitrite level as 20 mg/litre. It means that:**
a) There has been recent organic pollution
b) There has been remote organic pollution
c) The water may be considered safe for drinking purpose
d) The usual source of nitrite in water are ground salts
e) Nitrate level should be checked because presence of nitrite does not convey any meaning

25. **The recommended illumination for casual reading is:**
a) 70 lux
b) 80 lux
c) 90 lux
d) 100 lux
e) 110 lux

26. **Biological effects of light includes all, EXCEPT for:**
a) Degradation of bilirubin
b) Rhythm of body temperature
c) Physical activities
d) Mental capabilities
e) Activation of precursor of vitamin D

27. **There was high incidence of diarrhoea in an urban slum. The water test report showed: Chloride 250 ppm, nitrate 40 ppm, total dissolved solids 500 ppm, and E. coli 5/100 ml. The conclusion drawn is that:**
a) The chloride level is too high
b) The nitrate level is too high
c) Total dissolved solids are too high
d) It is hard water
e) There is fecal contamination

Key:	24.a)	25.d)	26.d)	27.e)

28. **In physical examination of water there was smell of rotten eggs. The probable cause presence of excessive amount of:**
   a) Ammonia
   b) Hydrogen sulfide
   c) Lead oxide
   d) Insecticides
   e) Feaces

29. **Which of the following statements regarding hospital waste is true?**
   a) Usually about 90% of the total is the risk waste
   b) Pharmaceutical waste is not included in hospital waste
   c) Non-risk waste should not be disposed along with the ordinary city waste
   d) 'Inertization' is one of the methods of disposal of hospital waste
   e) Risk and 'non-risk waste' should be disposed together

30. **The recommended disposal of contaminated solid waste of hospital like cotton dressings and swabs, is by incineration. The colour coding of containers for this type of waste is:**
   a) Black
   b) White
   c) Yellow
   d) Blue
   e) Green

31. **Choose the best option regarding genotoxic hospital waste.**
   a) It is usually used in gynaecological wards
   b) It is regarded as non risk waste
   c) It contains cytotoxic drugs used in cancer therapy
   d) It includes genetically engineered drugs
   e) It should be disposed in black plastic bags

Key:	28.b)	29.d)	30.c)	31.c)

32. **The procedure by which heavy metals build upto a significant amount in our body, is known as:**
   a) Biosynthesis
   b) Biodegradation
   c) Biomagnification
   d) Slow poisoning
   e) Metallosis

33. **Hospital waste containing cytototoxic drugs is classified as:**
   a) Serotoxic waste
   b) Non-risk waste
   c) Genotoxic waste
   d) Genetic waste
   e) Nuclear waste

34. **Which one of the following is non-ionizing radiation?**
   a) Gamma rays
   b) X-rays
   c) Beta particles
   d) Alfa particles
   e) Ultra-violet rays

35. **Which of the following options will NOT protect against exposure to ionizing radiation?**
   a) Shielding with lead
   b) Shielding with clothes
   c) Increasing distance from the source
   d) Reducing the time of exposure
   e) Use of radiation scanner to detect radiation source

Key:	32.c)	33.c)	34.e)	35.b)

36. **Which of the following is ionizing radiation?**
a) LASER waves
b) Infra red radiation
c) Ultra violet radiation
d) Gamma radiation
e) Micro waves

37. **Dosimetre is used to find out:**
a) Total radiation dose received
b) Amount of heat produced by a heat source
c) Atmospheric pressure
d) Wavelength of electromagnetic waves
e) Relative humidity in air

38. **A person is employed in X-ray department. The appropriate screening test to detect excessive exposure to ionizing radiation for him/her would be:**
a) Haemoglobin level
b) White blood cell count
c) Blood sugar level
d) Biopsy of lymph node
e) Urine analysis

39. **Cobalt is a radioactive material. It produces:**
a) Gamma (γ) rays
b) X-rays
c) Infra red rays
d) Ultra-violet rays
e) Micro rays

Key:	36.d)	37.a)	38.b)	39.a)

40. **Which of the following hospital waste is collected in a container lined with yellow plastic bags?**
a) Sharps
b) Ash from incineration
c) Left-over food and waste from offices of doctors
d) Risk waste
e) Non-risk waste

41. **Suppose you are a member of hospital waste management team. What will be your recommendation regarding safe disposal of liquid waste of hospital, like blood and sera?**
a) Incineration
b) Chemical disinfection
c) Deep burial
d) Inertization
e) Disposal in sewage system

42. **Suppose you are a member of hospital waste management team. The environment protection agency is very much concerned that there should be no air pollution from the incinerator being used for hospital waste. Out of following, which device method you will prefer?**
a) Inertization
b) Encapsulation
c) Single chambered furnace incinerator
d) Drum or brick incinerator
e) Pyrolytic incinerator

Key:	40.d)	41.b)	42.e)

43. **Aviation authorities want your recommendation regarding a proper fumigant insecticide for disinfestation of an aircraft. Out of following, which would you choose?**
   a) Abate
   b) Malathion
   c) DDT
   d) Dichlorovos (DDVP)
   e) Fenthion

44. **In year 2000 more than 500 people from four closely situated villages in Punjab developed serious bone disorders. Out of following, which chemical in drinking water was responsible for this epidemic?**
   a) Nitrite
   b) Sulfate
   c) Fluoride
   d) Arsenic
   e) Chloride

45. **Anopheles mosquito is the vector for transmission of malaria. To control this insect, a number of methods are recommended. Out of following which one is the most 'environmentally friendly'?**
   a) Insecticide spray
   b) Biological control by using gambusia fish
   c) Mixing organochlorine compounds in water sources
   d) Use of kerosene oil to cover the surface of water of ponds
   e) Removal of vegetation

Key:	43.d)	44.c)	45.b)

46. **A health care expert recommended 'dug well' type of latrine in a village. Choose the appropriate statement in this regard.**
   a) The latrine consists of a circular hole, 30 to 40 cm in diameter dug vertically into the ground
   b) A special equipment known as 'auger' is required to dig this type of latrine
   c) Anaerobic digestion takes place in this type of latrine
   d) The latrine should be at least 5 metres away from any source of water supply in the ground
   e) This type of latrine has shorter life than bore-hole latrine

47. **Activated sludge process is an approved method of disposal of sewage water. The most important part of this method is:**
   a) Aeration tank
   b) Screening chamber
   c) Primary sedimentation tank
   d) Secondary sedimentation tank
   e) Tertiary sedimentation tank

48. **In a large city where population is above 4 million, there is shortage of available land and the ground water is salty, but the surface water in form of a canal is available. What should be the appropriate method to provide safe drinking water for this city's population?**
   a) Slow sand filter
   b) Rapid sand filter
   c) Chlorination
   d) Bleaching powder
   e) Sedimentation and boiling

Key:	46.c)	47.a)	48.b)

49. **The recommended methods of disposal of liquid or semi liquid waste from laboratory like cultures media and discarded vaccines etc are by using autoclaving, microwaving or chemical treatment. The color coding of containers for these types of wastes should be:**

a) Black
b) White
c) Green
d) Blue
e) Red

50. **An engineer working in a factory took into consideration the four factors, i.e. air temperature, velocity, humidity, and mean radiant heat. This is known as which one of the following indices of thermal comfort?**

a) Cooling power
b) Effective temperature
c) Corrected effective temperature
d) Comfort zone
e) Maximum allowable sweat rate

51. **A member of the Environment Protection Agency (EPA) was planning to monitor the air pollution in a city. The best indictors for this purpose would be:**

a) Sulfur dioxide, smoke, and suspended particles
b) Carbon dioxide and carbon monoxide
c) Lead oxide and ammonia
d) Hydrocarbon and ozone
e) Polynuclear Aromatic Hydrocarbon (PAH)

Key:	49.e)	50.c)	51.a)

52. **In a factory toxic fumes are produced and these can only be removed with the help of long tortuous ducts. For this purpose what is the recommended method?**

a) Open air with flue
b) Propulsion by fan that push the air from outside
c) Propulsion by steam jet
d) High pressure centrifugal fans that extract the air by creating vacuum
e) Low pressure centrifugal fans

53. **Chemical analysis of a drinking water sample showed hardness: 100 mg/litre (2 mEq./litre). This is classified as:**

a) Very soft water
b) Soft water
c) Moderately hard water
d) Hard water
e) Very hard water

54. **The water of a town was tested for arsenic concentration which was found to be 1.5 mg/litre. The inference drawn from this result is that:**

a) The arsenic content is very high and this water should not be used for human consumption
b) The arsenic content is very low and this water should not be used for human consumption
c) The arsenic content is within normal range and this water can be used for human consumption
d) Bacteriological examination should also be done before reaching a conclusion
e) The result is inconclusive because organic arsenic content was not checked

Key:	52.d)	53.c)	54.a)

55. **The water of a well was having both temporary and permanent hardness. To remove both these type of hardness, you will recommend:**
a) Boiling
b) Bleaching powder
c) Lime
d) Sodium carbonate
e) Permutit process

56. **Suppose you are in charge of a Rural Health Center. What amount of freshly prepared bleaching powder would you recommend to disinfect one cubic metre of water, when Horrock's apparatus is not available?**
a) 1.3 grams
b) 2.3 grams
c) 5.3 grams
d) 8.3 grams
e) 12.3 grams

57. **The 8 hour average sound pressure level in a factory was measured by an expert in ergonomics by using a sound level meter. The result was 40 decibels. The conclusion drawn from this observation that:**
a) The sound range is within accepted range
b) The sound range is higher than accepted range
c) There is a risk of permanent loss of hearing
d) Auditory fatigue may occur
e) The result is inconclusive

58. **Dosimetre is an instrument which is used for monitoring:**
a) Ionizing radiation emitted by a radioactive source
b) Non-ionizing radiation emitted by sun
c) Cumulative ionizing radiation dose received
d) Noise level
e) Air current

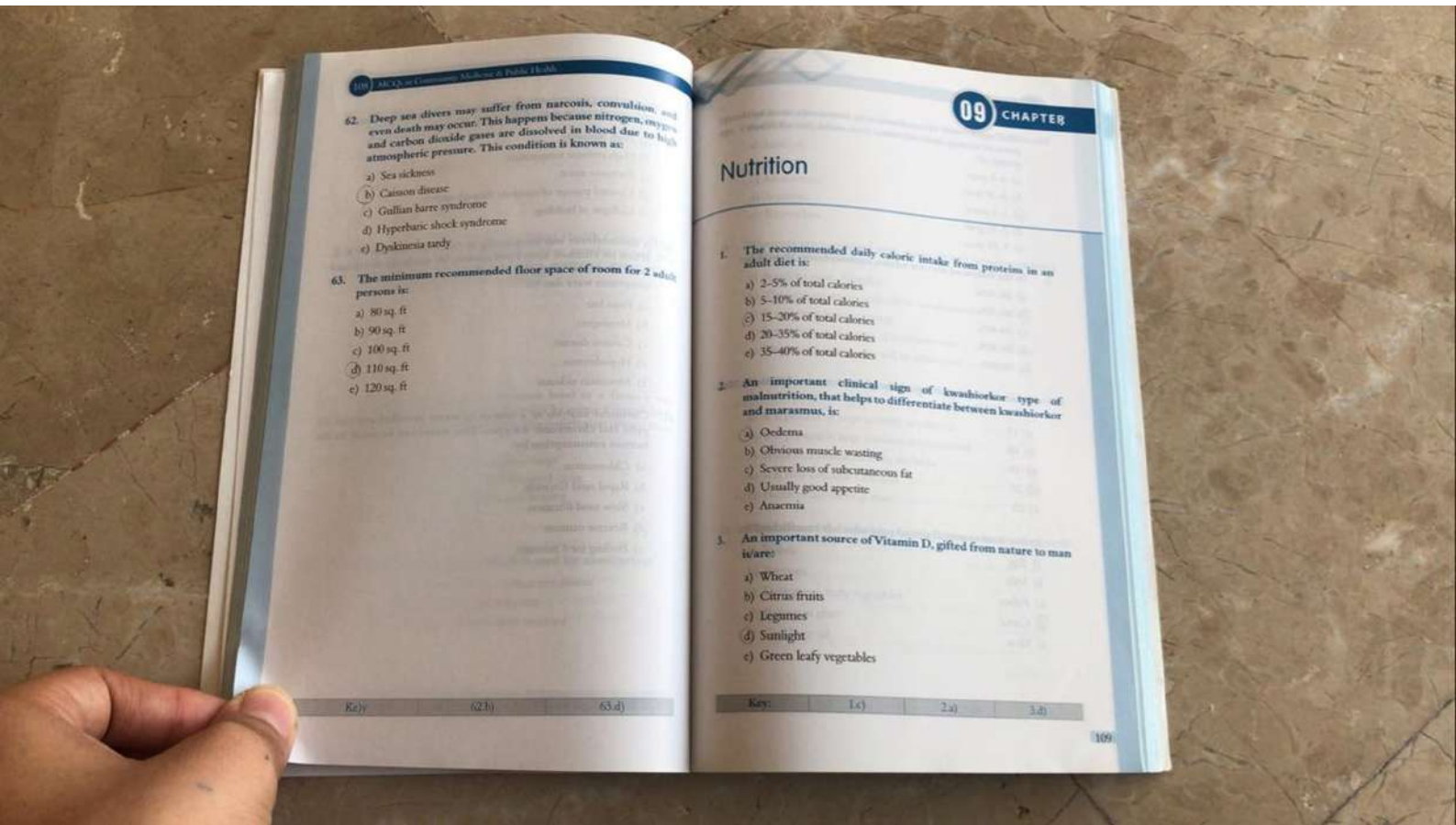
Key:	55.c)	56.b)	57.a)	58.c)

59. **For construction of hygienic house, "damp proof course" is recommended. It is used for prevention against:**
a) High humidity
b) High ambient temperature
c) Excessive noise
d) Upward passage of moisture through walls
e) Collapse of building

60. **A mountaineer was attempting to reach the summit of K-2. When he climbed upto 6,000 metres, he suddenly developed breathlessness, fatigue, headache, and vomiting. His symptoms were due to:**
a) Frost bite
b) Meningitis
c) Caisson disease
d) Hypothermia
e) Mountain sickness

61. **Chemical analysis of a source of water revealed arsenic: 0.5 ppm and chromium: 0.4 ppm. This water can be made fit for human consumption by:**
a) Chlorination
b) Rapid sand filtration
c) Slow sand filtration
d) Reverse osmosis
e) Boiling for 8 minutes

Key:	59.d)	60.e)	61.d)



62. **Deep sea divers may suffer from narcosis, convulsion, and even death may occur. This happens because nitrogen, oxygen and carbon dioxide gases are dissolved in blood due to high atmospheric pressure. This condition is known as:**

a) Sea sickness
b) Caisson disease
c) Guillan barre syndrome
d) Hyperbaric shock syndrome
e) Dyskinesia tardy

63. **The minimum recommended floor space of room for 2 adult persons is:**

a) 80 sq. ft
b) 90 sq. ft
c) 100 sq. ft
d) 110 sq. ft
e) 120 sq. ft

Key:	62.b)	63.d)

CHAPTER 09

Nutrition

1. **The recommended daily caloric intake from proteins in an adult diet is:**

a) 2–5% of total calories
b) 5–10% of total calories
c) 15–20% of total calories
d) 20–35% of total calories
e) 35–40% of total calories

2. **An important clinical sign of kwashiorkor type of malnutrition, that helps to differentiate between kwashiorkor and marasmus, is:**

a) Oedema
b) Obvious muscle wasting
c) Severe loss of subcutaneous fat
d) Usually good appetite
e) Anaemia

3. **An important source of Vitamin D, gifted from nature to man is/are:**

a) Wheat
b) Citrus fruits
c) Legumes
d) Sunlight
e) Green leafy vegetables

Key:	1.c)	2.a)	3.d)

4. **Mid upper arm circumference is sometimes used to diagnose protein energy malnutrition. It is valid for children's age group of:**
   a) 0–5 years
   b) 0–10 years
   c) 1–5 years
   d) 2–10 years
   e) 5–15 years

5. **In the balanced diet for adults, carbohydrates should be:**
   a) 80–90%
   b) 60–70%
   c) 30–40%
   d) 20–30%
   e) 10–20%

6. **A man's weight is 80 kg and height is 2 metres. His Body Mass Index (BMI) will be:**
   a) 17
   b) 18
   c) 19
   d) 20
   e) 25

7. **Lysine is an essential amino acid which is insufficient in:**
   a) Egg
   b) Milk
   c) Pulses
   d) Cereal
   e) Meat

Key:	4.c)	5.b)	6.d)	7.d)

8. **Pulses are known as poor man's meat. However, which one of the following amino acids are they deficient in?**
   a) Leucine
   b) Lysine
   c) Methionine
   d) Arginine
   e) Tryptophan

9. **If cereals are combined with pulses, it will be more or less a balanced diet, because:**
   a) It will be more digestible
   b) The limiting amino acid will be compensated
   c) It will provide more energy
   d) It will be a good source of micronutrients
   e) The harmful fatty acids will be eliminated

10. **Our diet contains a fatty acid known as linoleic acid. Choose the best option about it.**
   a) It is present in large quantity in palm oil
   b) It is present in large quantity in coconut oil
   c) It can be manufactured by the body
   d) It is non-essential fatty acid
   e) None of the above is true

11. **Which one of the following has the highest vitamin A content?**
   a) Pulses
   b) Potatoes
   c) Dark green leafy vegetables
   d) Banaspati ghee
   e) Cod liver oil

Key:	8.c)	9.b)	10.e)	11.e)

12. **According to WHO, total dietary fat intake should not be more than:**
a) 5–8%
b) 8–12%
c) 20–30%
d) 30–40%
e) 40–50%

13. **The most common lesion associated with Riboflavin deficiency is:**
a) Cheilosis
b) Angular stomatitis
c) Glossitis
d) Nasolabial dyscbacia
e) Peripheral neuropathy

14. **Which of the following statements regarding iron in diet is true:**
a) The main sources of haem iron in diet are cereals and green leafy vegetables
b) The bioavailability of haem iron is poor
c) Foods that inhibit iron absorption include milk, egg, and tea
d) Red meat is a poor source of iron
e) The iron requirements for adult males and females are equal

15. **An investigator wants to to estimate prevalence of vitamin A deficiency in a community. The most suitable group for this study would be:**
a) Infant s
b) Children 6 months to 6 years of age
c) Teenagers
d) Women in child bearing age
e) Adults

Key:	12.c)	13.b)	14.c)	15.b)

16. **One of the criteria to detect the prevalence of xerophthalmia in a community is:**
a) Serum riboflavin
b) Serum thiamine
c) Serum niacin
d) Serum folic acid
e) None of the above

17. **The extra requirement of energy during lactation for a woman is about:**
a) 100 kcal/day
b) 200 kcal/day
c) 550 kcal/day
d) 750 kcal/day
e) 900 kcal/day

18. **The appropriate test to check the efficacy of pasteurization of milk is:**
a) Phosphatase test
b) ELISA test
c) Streptococcal count
d) Chlorine demand
e) Staphylococcal count

19. **The main reason of high prevalence of anaemia in Pakistan is:**
a) Insufficient iron intake
b) Hookworm infestation
c) Roundworm infestation
d) Malaria
e) Poor bioavailability of dietary iron

Key:	16.e)	17.c)	18.a)	19.a)

20. **Zinc deficiency in diet may lead to:**
a) Growth failure
b) Sexual infantilism
c) Loss of taste
d) Delayed wound healing
e) All of the above

21. **Selenium deficiency, especially when combined with Vitamin E deficiency, may lead to reduced:**
a) Antibody production
b) Vision
c) Appetite
d) RBC production
e) WBC production

22. **Which of the following anthropometric measurements indicates chronic/past nutritional status in children?**
a) Weight
b) Height
c) Mid upper arm circumference
d) Skin fold thickness
e) Chest/head circumference ratio

23. **Choose the best option regarding 'body mass index'.**
a) The normal upper limit in adult male is 30
b) The normal upper limit in adult female is 28
c) The normal lower limit in adult male is 17
d) The normal lower limit in adult female is 16.5
e) It is not influenced by gender

Key:	20.(e)	21.(a)	22.(b)	23.(e)

24. **Women may suffer from osteomalacia if the diet is deficient in which vitamin?**
a) Vitamin A
b) Riboflavin
c) Thiamine
d) Vitamin D
e) Vitamin K

25. **A 5-year-old child complains of poor vision in evening and night. He/is likely to benefit by:**
a) Oral antibiotics
b) Eye drops containing antibiotics
c) Cod liver oil capsules
d) Suitable eyeglasses
e) Intra-ocular lens replacement

26. **Addition of iodine to table salt is known as:**
a) Food supplementation
b) Food mixing
c) Food addition
d) Food fortification
e) Food adulteration

27. **Choose the best option regarding 'aflatoxin':**
a) It is a mycotoxin produced by certain fungi
b) It may infest peanut, rice, wheat, and maize etc
c) High temperature and moisture increase its risk
d) It is hepato-toxic
e) All of the above are correct

Key:	24.(d)	25.(c)	26.(d)	27.(e)

28. **For planning a balanced diet:**
a) Protein should be at least 30% of total daily caloric intake
b) Saturated fat should not be more than 40% of total caloric intake
c) Salt intake should be reduced to an average of not more than 5 gram/day
d) There should be excessive consumption of refined carbohydrates
e) Junk foods are recommended for weight loss

29. **Metabolic studies have demonstrated that trans fatty acids are:**
a) Less atherogenic than saturated fatty acids
b) More atherogenic than saturated fatty acids
c) Beneficial to our health
d) Provide more energy than saturated fatty acids
e) Transferred from carbohydrates

30. **A child whose age was about one year, presented with growth failure, curved legs, and pigeon shaped chest. The most likely diagnosis would be:**
a) Marasmus
b) Kwashiorkor
c) Osteomalacia
d) Rickets
e) Cretinism

31. **Five samples of water from different localities were taken, the fluoride contents of which are given below. Which one of the following samples is most likely to cause mottling of the teeth in growing children?**
a) 0.01 mg/litre
b) 0.05 mg/litre
c) 0.5 mg/litre
d) 1.0 mg/litre
e) 3.5 mg/litre

Key:	28.c)	29.b)	30.d)	31.e)

32. **A researcher wants, in a short time, to assess the nutritional status of large number of children from 1 to 5 years of age. What should be the appropriate method in this situation?**
a) Weight for age
b) Weight for height
c) Measuring the mid upper arm circumference with Shakir tape
d) Height for age
e) Skin fold thickness

33. **Out of the following, which food has low glycaemic index?**
a) Corn flakes
b) White bread
c) Baked potatoes
d) Basmati rice
e) Whole grains

34. **A dietitian wants to evaluate the protein quality of various types of food. Out of following methods, which will be the most practical?**
a) Protein efficiency ratio
b) Protein absorption rate
c) Presence of essential amino acids
d) Net protein utilization
e) Protein utilization rate

35. **A pregnant woman requires more calories in her diet because of the growing foetus. How many additional calories should she take per day during pregnancy?**
a) 250 kcal
b) 350 kcal
c) 450 kcal
d) 550 kcal
e) 650 kcal

Key:	32.c)	33.e)	34.d)	35.b)

36. **Milk is a good source of protein, minerals and vitamins. However it may be deficient in:**
a) Vitamin A
b) Thiamine
c) Vitamin C
d) Vitamin D
e) Vitamin E

37. **For milk pasteurization, 'high temperature and shoot time method' is widely used. In this method, the milk is heated to:**
a) 60° C
b) 65° C
c) 72° C
d) 84° C
e) 90° C

38. **Dietary fibres are essential component of a balanced diet. One gram of fermentable dietary fibres provides approximately:**
a) 2 kcal
b) 4 kcal
c) 6 kcal
d) 10 kcal
e) 12 kcal

39. **Milling the rice is a common procedure. The resulting white polished rice looks very attractive. However, one important nutrient lost due to this action is:**
a) Thiamine
b) Iodine
c) Potassium
d) Fat
e) Carbohydrate

Key:	36.c)	37.c)	38.a)	39.a)

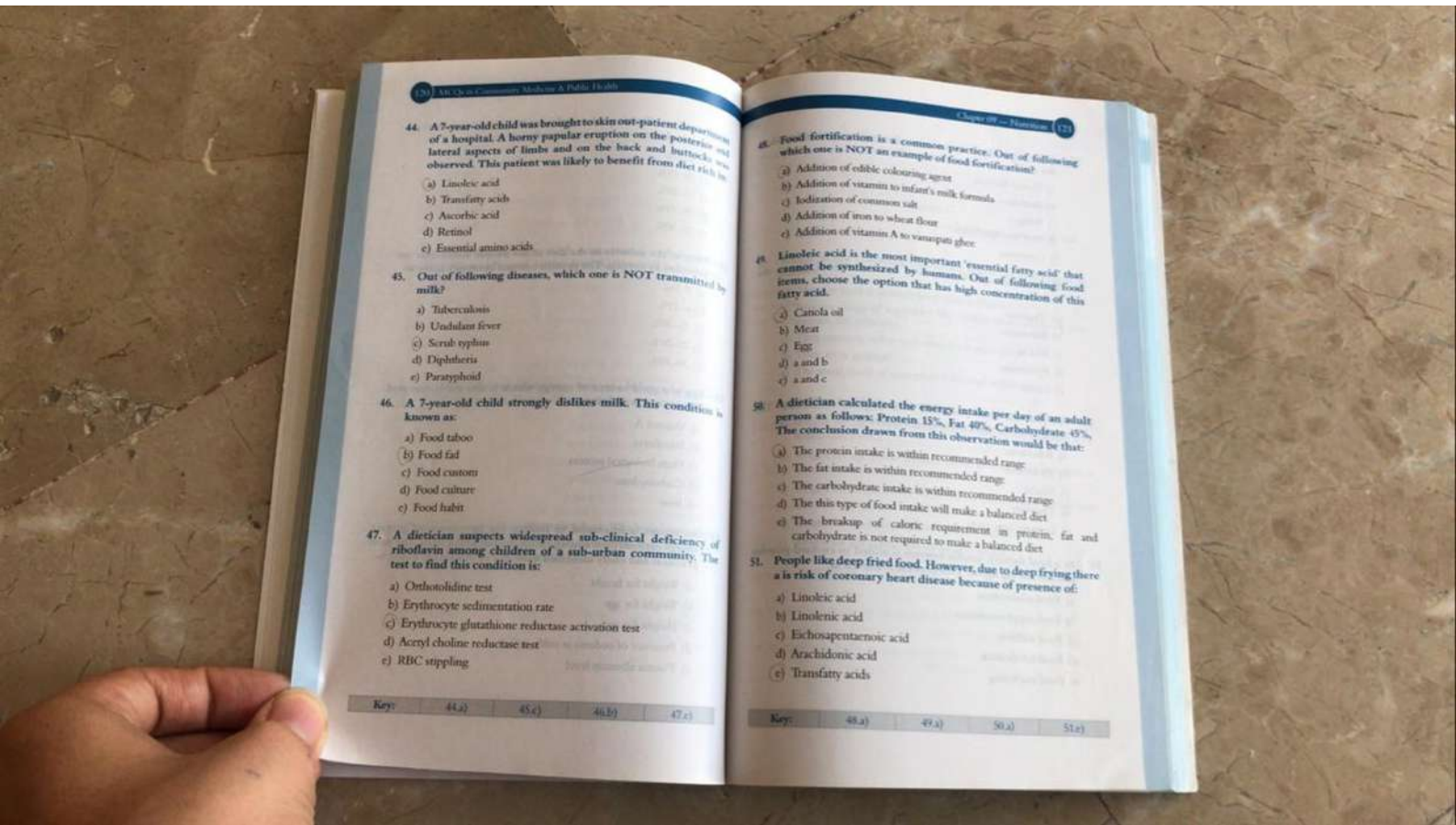
40. **Pulses are called as poor man's meat. The protein content in them is about:**
a) 5–10%
b) 10–15%
c) 15–20%
d) 20–25%
e) 25–30%

41. **Most of the calories in the diet of the people world over are provided by cereals. The protein content in cereals is about:**
a) 2–5%
b) 6–12%
c) 15–20%
d) 22–26%
e) 30–35%

42. **Egg is a good source of energy which is also easily digested. However, it is deficient in:**
a) Vitamin A
b) Riboflavin
c) High biological protein
d) Carbohydrate
e) Iron

43. **An expert is interested in finding the prevalence of protein energy malnutrition among children in an urban slum. The most practical and easily identified indicator in this survey would be:**
a) Weight for height
b) Weight for age
c) Height for age
d) Presence of oedema at ankle region
e) Plasma albumin level

Key:	40.d)	41.b)	42.d)	43.b)



44. A 7-year-old child was brought to skin out-patient department of a hospital. A horny papular eruption on the posterior and lateral aspects of limbs and on the back and buttocks was observed. This patient was likely to benefit from diet rich in:
a) Linoleic acid
b) Transfatty acids
c) Ascorbic acid
d) Retinol
e) Essential amino acids

45. Out of following diseases, which one is NOT transmitted by milk?
a) Tuberculosis
b) Undulant fever
c) Scrub typhus
d) Diphtheria
e) Paratyphoid

46. A 7-year-old child strongly dislikes milk. This condition is known as:
a) Food taboo
b) Food fad
c) Food custom
d) Food culture
e) Food habit

47. A dietician suspects widespread sub-clinical deficiency of riboflavin among children of a sub-urban community. The test to find this condition is:
a) Orthotolidine test
b) Erythrocyte sedimentation rate
c) Erythrocyte glutathione reductase activation test
d) Acetyl choline reductase test
e) RBC stippling

Key:	44.a)	45.c)	46.b)	47.c)

48. Food fortification is a common practice. Out of following which one is NOT an example of food fortification?
a) Addition of edible colouring agent
b) Addition of vitamin to infant's milk formula
c) Iodization of common salt
d) Addition of iron to wheat flour
e) Addition of vitamin A to vanaspati ghee

49. Linoleic acid is the most important 'essential fatty acid' that cannot be synthesized by humans. Out of following food items, choose the option that has high concentration of this fatty acid.
a) Canola oil
b) Meat
c) Egg
d) a and b
e) a and c

50. A dietician calculated the energy intake per day of an adult person as follows: Protein 15%, Fat 40%, Carbohydrate 45%. The conclusion drawn from this observation would be that:
a) The protein intake is within recommended range
b) The fat intake is within recommended range
c) The carbohydrate intake is within recommended range
d) The this type of food intake will make a balanced diet
e) The breakup of caloric requirement in protein, fat and carbohydrate is not required to make a balanced diet

51. People like deep fried food. However, due to deep frying there is risk of coronary heart disease because of presence of:
a) Linoleic acid
b) Linolenic acid
c) Eichosapentaenoic acid
d) Arachidonic acid
e) Transfatty acids

Key:	48.a)	49.a)	50.a)	51.e)

52. If there is iodine deficiency in soil in a geographical location, the children of that area may suffer from:

a) Dental fluorosis
b) Rickets
c) Pellagra
d) Poor dim light vision
e) Cretinism

53. Wernick's encephalopathy seen in alcoholics is due to the deficiency of:

a) Thiamine
b) Riboflavin
c) Niacin
d) Pyridoxine
e) Lysine

54. A 5-year-old child presented with 'angular stomatitis'. The likely cause of this condition is deficiency of:

a) Riboflavin
b) Pyridoxine
c) Niacin
d) Thiamine
e) Essential fatty acids

55. In a food factory, vanilla essence is added to custard powder as a flavouring agent. This process is known as:

a) Food adulteration
b) Food supplementation
c) Food additive
d) Food fortification
e) Food marketing

Key:	52.e)	53.a)	54.a)	55.c)

56. Which of the following statements regarding milk is not correct?

a) The chief protein of milk is casein
b) The fat content of human milk is more than buffalo milk
c) Milk is a poor source of vitamin C
d) Energy provided by by 100 grams of buffalo milk is about 117 kcal
e) Human milk is a poor source of iron

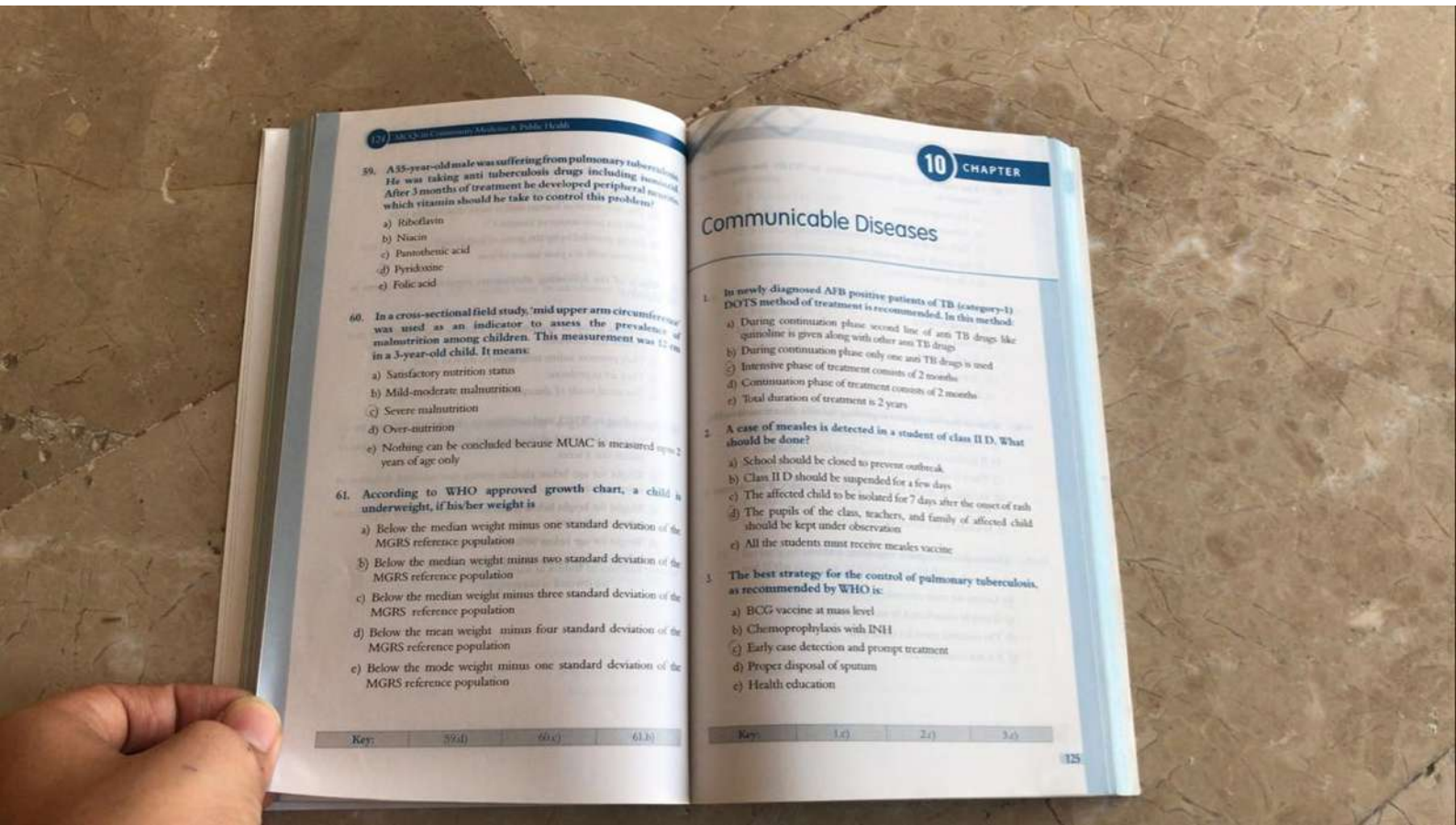
57. Which of the following statements regarding Goitrogens is correct?

a) They are used to prevent development of goiter
b) Brassica group of vegetables like cabbage and cauliflower may contain this substance
c) They promote iodine utilization by thyroid gland
d) They act as probiotic
e) The usual mode of absorption is through inhalation

58. According to WHO, malnutrition in children is defined as:

a) Weight for age below median minus one standard deviation or minus one z score
b) Weight for age below median minus two standard deviation or minus two z score
c) Weight for height below mean minus one standard deviation or minus one z score
d) Weight for age below 90% of median weight
e) Weight for age below 95% of median weight

Key:	56.b)	57.b)	58.b)



59. **A 55-year-old male was suffering from pulmonary tuberculosis. He was taking anti tuberculosis drugs including isoniazid. After 3 months of treatment he developed peripheral neuritis, which vitamin should he take to control this problem?**
   a) Riboflavin
   b) Niacin
   c) Pantothenic acid
   d) Pyridoxine
   e) Folic acid

60. **In a cross-sectional field study, 'mid upper arm circumference' was used as an indicator to assess the prevalence of malnutrition among children. This measurement was 12 cm in a 3-year-old child. It means:**
   a) Satisfactory nutrition status
   b) Mild-moderate malnutrition
   c) Severe malnutrition
   d) Over-nutrition
   e) Nothing can be concluded because MUAC is measured upto 2 years of age only

61. **According to WHO approved growth chart, a child is underweight, if his/her weight is**
   a) Below the median weight minus one standard deviation of the MGRS reference population
   b) Below the median weight minus two standard deviation of the MGRS reference population
   c) Below the median weight minus three standard deviation of the MGRS reference population
   d) Below the mean weight minus four standard deviation of the MGRS reference population
   e) Below the mode weight minus one standard deviation of the MGRS reference population

Key:	59.(d)	60.(c)	61.(b)

10 CHAPTER

Communicable Diseases

1. **In newly diagnosed AFB positive patients of TB (category-1) DOTS method of treatment is recommended. In this method:**
   a) During continuation phase second line of anti TB drugs like quinoline is given along with other anti TB drugs
   b) During continuation phase only one anti TB drugs is used
   c) Intensive phase of treatment consists of 2 months
   d) Continuation phase of treatment consists of 2 months
   e) Total duration of treatment is 2 years

2. **A case of measles is detected in a student of class II D. What should be done?**
   a) School should be closed to prevent outbreak
   b) Class II D should be suspended for a few days
   c) The affected child to be isolated for 7 days after the onset of rash
   d) The pupils of the class, teachers, and family of affected child should be kept under observation
   e) All the students must receive measles vaccine

3. **The best strategy for the control of pulmonary tuberculosis, as recommended by WHO is:**
   a) BCG vaccine at mass level
   b) Chemoprophylaxis with INH
   c) Early case detection and prompt treatment
   d) Proper disposal of sputum
   e) Health education

Key:	1.(c)	2.(c)	3.(c)

4. **The best strategy recommended by WHO for control of malaria is:**
   a) Chemoprophylaxis
   b) Immunoprophylaxis
   c) Early case detection and prompt treatment
   d) Insecticide spray on mass level
   e) Use of mosquito nets

5. **Malaria incidence is highest in:**
   a) North America
   b) South Asia
   c) South America
   d) Tropical Africa
   e) Far East

6. **Choose the best option regarding rubella (German measles).**
   a) It causes enlargement of posterior cervical lymph node
   b) It produce a rash which initially appears on abdomen
   c) There is significant incidence of post rubella diarrhoea
   d) Vaccination should be given during pregnancy if the woman is not immune
   e) In adults, it is a severe illness

7. **Choose the best option regarding scabies.**
   a) Housefly is responsible for its spread in community
   b) Lesions are most common on scalp
   c) It may be complicated by secondary infection
   d) The causative agent is a chlamydia
   e) It is not communicable

Key:	4.c)	5.d)	6.a)	7.c)

8. **Choose the best option regarding staphylococcus food poisoning.**
   a) It is caused by a toxin
   b) Incubation period is 5–7 days
   c) It is treated with antibiotics
   d) Fever is common in this condition
   e) Mortality rate is high

9. **The main mode of transmission of ancylostoma duodenale is:**
   a) Mosquito bite
   b) Faeco-oral
   c) Inhalation
   d) Per cutaneous
   e) Blood

10. **One limitation of validity of 'tuberculin test' is its cross-reactivity to:**
    a) Atypical mycobacteria
    b) Bordetella pertussis
    c) Corynebacterium diphtheriae
    d) Brucella abortus
    e) Staphylococcus aureus

11. **Investigation for pulmonary tuberculosis should be carried out if the duration of cough is more than:**
    a) Two days
    b) Five days
    c) One week
    d) Two weeks
    e) Three weeks

Key:	8.a)	9.d)	10.a)	11.e)

12. **A person met a roadside accident. He/she suffered a deep wound on the left leg which was found to be contaminated with wood dust. There was no history of tetanus toxoid immunization. To protect this person, the best option would be:**
   a) Surgical toilet and antibiotics
   b) Surgical toilet and full course of tetanus toxoid
   c) Surgical toilet, full course of tetanus toxoid, and tetanus immunoglobulin
   d) Full course of tetanus toxoid and tetanus immunoglobulin
   e) Full course of tetanus toxoid

13. **Chemoprophylaxis for tuberculosis is most likely to be required for:**
   a) Infants whose mothers are open case of tuberculosis
   b) Open case of tuberculosis
   c) Patients suffering from resistant strain of tuberculosis
   d) Recent tuberculin test converters from positive to negative
   e) Persons suffering from extra pulmonary tuberculosis

14. **The most dangerous Malarial parasite is:**
   a) Plasmodium falciparum
   b) Plasmodium malariae
   c) Plasmodium ovale
   d) Plasmodium vivax
   e) Anopheles mosquito

15. **Plague was responsible for millions of deaths in the past. Out of following statements, choose the best option regarding this disease.**
   a) Antibiotics like Streptomycin and Tetracycline are effective against the causative agents of plague
   b) Bubonic plague is the most dangerous type of plague
   c) It is a viral disease
   d) This disease is transmitted by infected mice
   e) There is no vaccine available against this disease

Key:	12.c)	13.a)	14.a)	15.a)

16. **Out of following diseases, which one has a short incubation period, ranging from a few hours to 2–3 days?**
   a) Hepatitis A
   b) Leprosy
   c) Staphylococcal food poisoning
   d) Typhoid fever
   e) Measles

17. **Choose the appropriate statement regarding 'anthrax'.**
   a) Cutaneous anthrax (Malignant Pustule) is the most dangerous type of anthrax
   b) Intestinal Anthrax occurs due to ingestion of vegetative form of bacillus anthracis
   c) Pulmonary anthrax occurs due to inhalation of spores of bacillus anthracis
   d) This disease occurs in human beings only
   e) The causative agent is a spirochete

18. **Choose the correct statement regarding tuberculin test (Mantoux test).**
   a) Indurations > 1 cm is usually considered as positive test response
   b) Positive test always means that the person is suffering from tuberculosis
   c) The medicine which is used in the test is known as BCG
   d) The result of the test is read after 24 hours of giving injection of PPD
   e) Atypical mycobacterium cannot give a positive tuberculin test response

Key:	16.c)	17.c)	18.a)

19. Choose the correct statement regarding congenital rubella:

a) It is caused by Measles virus
b) It is a chronic infection
c) Immunizing to women in childbearing age against rubella will not prevent this problem
d) The 3rd trimester of pregnancy is the most dangerous time
e) The sign and symptoms of the disease do not appear until the child is 10 years old

20. Contra-indication for giving anti rabies vaccines includes:

a) Bite by wild animal
b) A case when biting animal cannot be traced
c) A pregnant woman in her first trimester bitten by a stray dog
d) Bite by a vampire
e) Unprovoked bite by a lizard

21. A mother brought her 9 months old child to a health facility with severe watery diarrhoea, vomiting, and high-grade fever. The mother reported that the child had received some injection by a vaccinator a few hours earlier. The most likely diagnosis would be:

a) Toxic shock syndrome (TSS) due to contaminated measles vaccine
b) Cholera
c) Staphylococcal food poisoning
d) Clostridium perfringens food poisoning
e) Bacillary dysentery

22. For the prevention of influenza following can be used:

a) Anti-viral drugs like amantadine
b) Split virus vaccine
c) Live attenuated influenza vaccine
d) Recombinant influenza vaccine
e) All of the above

Key:	19.b)	20.e)	21.a)	22.e)

23. 'Arbovirus infections' are classified as:

a) Arthropod borne viral diseases
b) Faeco-orally transmitted viral diseases
c) Droplet borne viral diseases
d) Vertically transmitted viral diseases
e) Diseases spread by direct contact

24. Yellow fever is transmitted by:

a) Tsetse fly
b) House fly
c) Black fly
d) Culex mosquito
e) Aedes mosquito

25. A traveller has come from Bolivia to Pakistan. At airport, the doctor should check for a valid vaccine certificate for:

a) Cholera
b) HIV-AIDS
c) Plague
d) Yellow fever
e) Meningococcal meningitis

26. For prevention of Hepatitis A infection, all the following steps are correct, EXCEPT for:

a) Disinfection of fomite, urine, and faeces
b) Boiling of water for 5 minutes
c) Administration of normal human immunoglobulin in early incubation period
d) Active immunization
e) Pasteurization of milk

Key:	23.a)	24.e)	25.d)	26.e)

27. **Choose the best option regarding Oral Rehydration Salt:**
a) Glucose is added in ORS to provide energy to the patient
b) Sodium bicarbonate is recommended by WHO in place of trisodium citrate
c) If ORS is not available, then 5 grams of table salt and 20 grams of sugar can be used until ORS is available
d) After dissolving the ORS in water the mixture should be boiled
e) ORS cannot be recommended in cholera

28. **Which of the following statements regarding japanese encephalitis is correct?**
a) It is transmitted by aedes aegypti mosquito
b) The disease can spread from man to man
c) Pigs are the main vertebrate host
d) The causative agent is a rickettsia
e) The disease is present only in Japan

29. **Which is the correct option for the prevention of brucellosis?**
a) Slaughtering the infected animals
b) Vaccination to animals
c) Boiling or pasteurization of milk
d) Personal hygiene
e) All of the above

30. **For the prevention of Severe Acute Respiratory Syndrome (SARS), all the measures listed below are correct, EXCEPT for:**
a) Prompt identification of person with SARS
b) Effective isolation of SARS patients in hospitals
c) Vaccination to all contacts
d) Appropriate protection of medical staff treating SARS patients
e) Exit screening of international travellers

Key:	27.c)	28.c)	29.e)	30.c)

31. **The first step for control of tuberculosis in a community is:**
a) Rifampicin chemoprophylaxis
b) INH chemoprophylaxis
c) Early detection of sputum positive cases
d) Tuberculin testing
e) Health education

32. **In a rural community there is high incidence of diarrhoeal diseases. In this situation, immunization against which disease is most appropriate?**
a) Tuberculosis
b) Diphtheria
c) Tetanus
d) Poliomyelitis
e) Measles

33. **In initial investigation of an epidemic of food poisoning, the appropriate procedure for data analysis would be:**
a) The incidence among exposed
b) Time, place, and person distribution
c) Cohort study
d) Randomised control trial
e) Chi square test

34. **Which is the correct statement regarding ancylostomiasis (Hook worm infestation)?**
a) The disease is transmitted by ingestion of eggs of hook worm
b) Chemotherapy does not play any role in control of this disease
c) Chandler's index can be used in epidemiological study of this disease
d) The disease is more common in urban areas as compared to rural areas
e) The disease is less dangerous than Ascariasis

Key:	31.c)	32.e)	33.b)	34.c)

35. **Choose the correct statement regarding dracunculiasis (guinea worm disease).**
   a) Cyclops is responsible for disease transmission
   b) Asia has many cases of this disease
   c) The disease is transmitted by respiratory route
   d) A country is said to be free from this disease on completion of one year with zero incidence
   e) The disease was eradicated from the world in year 2005

36. **In evaluation of leprosy control programme, one of the operational indicators is:**
   a) Incidence
   b) Prevalence
   c) Secondary attack rate
   d) Relapse rate
   e) Deformity rate

37. **Choose the correct option regarding chickenpox.**
   a) Primary infection causes herpes zoster
   b) Secondary attack rate in household contacts is high
   c) As the disease is mild, so infection during pregnancy causes no risk to developing foetus
   d) As the primary attack produces life long immunity, so the person may suffer from either Chickenpox or herpes zoster in his/her lifetime
   e) All are of the above correct

38. **Choose the correct option regarding meningococcal meningitis:**
   a) Treatment with Penicillin will eradicate carriers
   b) Rifampicin should be used for treatment of the disease
   c) This is predominantly a disease of adults and old people
   d) For contacts, vibramycin is the drug of choice
   e) None of the above

Key:	35.a)	36.d)	37.b)	38.e)

39. **The preventive steps taken against spread of infection from the medical staff to immunocompromised patients, is known as:**
   a) Barrier nursing
   b) Reverse barrier nursing
   c) Sanitary nursing
   d) Safe nursing
   e) Nosocomial prophylaxis

40. **According to the current knowledge, the best option for prevention of vertical transmission of infection from HIV-AIDS positive mother to the new born is:**
   a) Antiretroviral drug to the newborn
   b) Antiretroviral drugs to the mother during pregnancy and also to the new born
   c) No breast-feeding
   d) HIV immunization
   e) Clean delivery

41. **If the mother is sputum positive for acid-fast bacilli (AFB), then the best option to protect the newborn against tuberculosis is:**
   a) BCG vaccination to the newborn
   b) Tuberculin test to find the infection status in newborn
   c) Treatment of mother by DOTS and tuberculin test for the child. If the test is positive then chemoprophylaxis with INH should be given to the child
   d) BCG and INH to newborn
   e) X-ray chest to detect the disease at an early stage

42. **Pre-requisites for disease eradication include:**
   a) Effective vaccine or medicine
   b) No carrier state, sub clinical, and latent infection
   c) No animal reservoir
   d) Easy diagnosis
   e) All of the above

Key:	39.b)	40.b)	41.c)	42.e)

43. **Out of following diseases, which one is more likely to be eradicated by human effort?**
   a) Tetanus
   b) HIV-AIDS
   c) Measles
   d) Malaria
   e) Tuberculosis

44. **Which of the following statements true about Japanese Encephalitis, is not true?**
   a) It is a zoonotic disease
   b) Causative agent is a virus
   c) It is a mosquito borne disease
   d) There is no vaccine available to prevent this disease
   e) There is a large number of unapparent cases

45. **All of the following statements regarding dengue haemorrhagic fever are correct, EXCEPT for:**
   a) It is not a zoonotic disease
   b) The main vector is aedes aegypti mosquito
   c) It is thought to be due to double infection with dengue virus
   d) The main control measure is to offer vaccine to all the people in the affected area
   e) The transmission cycle is: man-mosquito-man

46. **If there is an epidemic of meningococcal meningitis among jail prisoners, the best chemoprophylaxis for the protection of contacts would be:**
   a) Chloramphenicol
   b) Chloroquine
   c) Rifampicin
   d) Doxicycline
   e) Penicillin

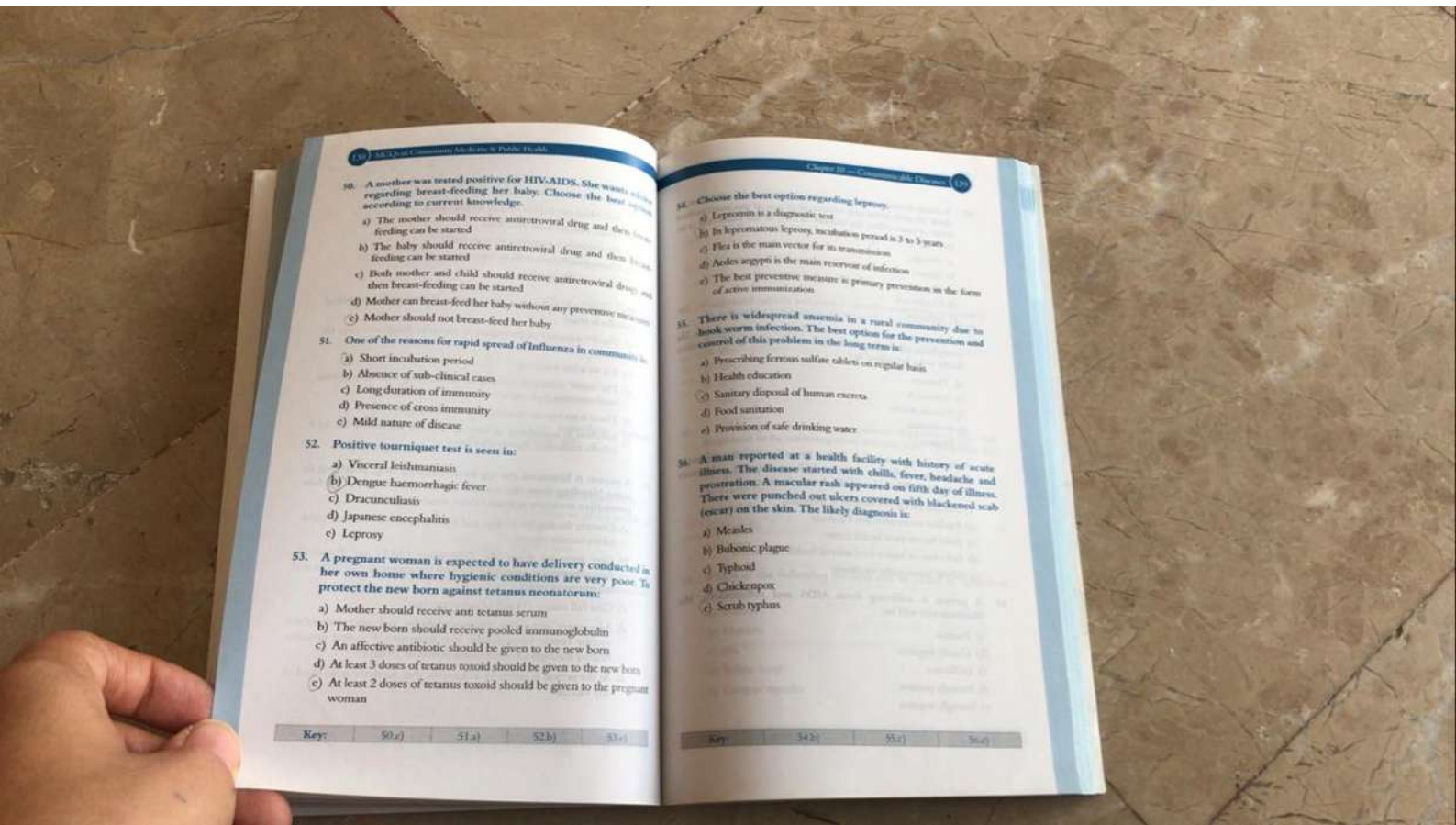
Key:	43.c)	44.d)	45.d)	46.c)

47. **According to the World Health Organization, the best strategy for the control of Rabies is:**
   a) Anti rabies vaccination to dogs on mass level
   b) Health education on mass level
   c) Pre-exposure vaccination on mass level
   d) Chemoprophylaxis to those who are at risk
   e) Killing of infected dogs

48. **Which of the following statements regarding Congenital rubella is true?**
   a) The 3rd trimester of pregnancy is the most dangerous time for foetus
   b) It is an acute infection
   c) The most common congenital defects are deafness, cardiac malformation, and cataract
   d) There is no vaccine available for its prevention
   e) Infection is considered to have occurred if the infant has Ig A rubella antibodies shortly after birth

49. **A person is bitten on the leg by a domestic dog, resulting in some bleeding from the wound. In this case the appropriate preventive measure against rabies would be to:**
   a) Observe the dog for 10 days and if it becomes ill then start anti-rabies vaccine course
   b) Give anti-viral drugs like Zidovudine (AZT) and Ritonavir, then observe the patient for 10 days for appearance of signs and symptoms of rabies
   c) Give full course (14 inj) of nerve vaccine
   d) Administer anti-rabies immunoglobulin and start anti-rabies vaccine course immediately; stop treatment if animal remains healthy throughout observation period of 10 days
   e) As the person is bitten by a domestic dog, so there is no need of any vaccine

Key:	47.a)	48.c)	49.d)



50. **A mother was tested positive for HIV-AIDS. She wants advice regarding breast-feeding her baby. Choose the best option according to current knowledge.**
   a) The mother should receive antiretroviral drug and then breast-feeding can be started
   b) The baby should receive antiretroviral drug and then breast-feeding can be started
   c) Both mother and child should receive antiretroviral drugs and then breast-feeding can be started
   d) Mother can breast-feed her baby without any preventive measures
   e) Mother should not breast-feed her baby

51. **One of the reasons for rapid spread of Influenza in community is:**
   a) Short incubation period
   b) Absence of sub-clinical cases
   c) Long duration of immunity
   d) Presence of cross immunity
   e) Mild nature of disease

52. **Positive tourniquet test is seen in:**
   a) Visceral leishmaniasis
   b) Dengue haemorrhagic fever
   c) Dracunculiasis
   d) Japanese encephalitis
   e) Leprosy

53. **A pregnant woman is expected to have delivery conducted in her own home where hygienic conditions are very poor. To protect the new born against tetanus neonatorum:**
   a) Mother should receive anti tetanus serum
   b) The new born should receive pooled immunoglobulin
   c) An affective antibiotic should be given to the new born
   d) At least 3 doses of tetanus toxoid should be given to the new born
   e) At least 2 doses of tetanus toxoid should be given to the pregnant woman

Key:	50.e)	51.a)	52.b)	53.e)

54. **Choose the best option regarding leprosy.**
   a) Lepromin is a diagnostic test
   b) In lepromatous leprosy, incubation period is 3 to 5 years
   c) Flea is the main vector for its transmission
   d) Aedes aegypti is the main reservoir of infection
   e) The best preventive measure is primary prevention in the form of active immunization

55. **There is widespread anaemia in a rural community due to hook worm infection. The best option for the prevention and control of this problem in the long term is:**
   a) Prescribing ferrous sulfate tablets on regular basis
   b) Health education
   c) Sanitary disposal of human excreta
   d) Food sanitation
   e) Provision of safe drinking water

56. **A man reported at a health facility with history of acute illness. The disease started with chills, fever, headache and prostration. A macular rash appeared on fifth day of illness. There were punched out ulcers covered with blackened scab (eschar) on the skin. The likely diagnosis is:**
   a) Measles
   b) Bubonic plague
   c) Typhoid
   d) Chickenpox
   e) Scrub typhus

Key:	54.b)	55.c)	56.e)

57. **In some diseases, carriers are the ultimate source of disease, so their identification and treatment is one of the most important ways of controlling the disease. Which of the following is an example of this type of disease?**
   a) Measles
   b) Tetanus
   c) Typhoid
   d) Chickenpox
   e) Influenza

58. **A tuberculosis patient is on DOTS method of treatment. He complains of tingling and numbness in his legs. He is most likely to be benefited by:**
   a) Thiamine
   b) Vitamin A
   c) Ferrous sulfate
   d) Pyridoxine
   e) Vitamin C

59. **A farmer reported in a BHU. Previous history suggested that he was suffering from multidrug resistant pulmonary tuberculosis. What should the doctor in charge do?**
   a) Put him on DOTS method of treatment
   b) Put him on modern anti TB drugs
   c) Refer him to rural health centre
   d) Refer him to higher level referral health care facility
   e) Advice homeopathy treatment

60. **A person is suffering from AIDS and tuberculosis. His Mantoux test will be:**
   a) Positive
   b) Usually negative
   c) Ineffective
   d) Strongly positive
   e) Strongly negative

Key:	57.c)	58.d)	59.d)	60.b)

61. **For the laboratory diagnosis of AIDS:**
   a) ELISA is a sensitive test
   b) ELISA is specific test
   c) ELISA is confirmatory test
   d) Western blot is a screening test
   e) Western blot test is done as first step

62. **Congenital rubella infection is considered to have occurred if the infant has following rubella antibody shortly after birth:**
   a) IgA
   b) IgG
   c) IgM
   d) IgD
   e) IgE

63. **A child reported at skin out-patient department. He was diagnosed to be suffering from oriental sore. The vector for this condition is:**
   a) Tsetse fly
   b) House fly
   c) Sand fly
   d) Black fly
   e) Louse

64. **Which of the following diseases can be called as 'arbovirus' infection?**
   a) Malaria
   b) Filariasis
   c) Flu
   d) Yellow fever
   e) German measles

Key:	61.a)	62.c)	63.c)	64.d)

65. A child received Mantoux test. After 48 hours, the induration at the site of injection was 1.5 cm in diameter. The inference drawn will be that:

a) The test is negative and the child is not infected with tubercle bacilli

b) The test is positive and the child is infected with tubercle bacilli

c) Only avian type of tubercle bacilli can give this type of result

d) Only BCG can give this type of result

e) The result is doubtful so the test should be repeated

66. A 30-year-old man developed a febrile illness 7 days after returning from Karachi. He was admitted complaining of severe myalgia and retro-orbital pain particularly on eye movement. On examination his temperature was 39 °C with diffuse macular rash on the trunk. There was no lymphadenopathy. What is the most likely diagnosis?

a) Acute HIV infection

b) Dengue fever

c) Hepatitis E

d) Secondary syphilis

e) Typhoid fever

67. Hepatitis A is the most common type of viral hepatitis in this part of the world. Which of the following measures can help to prevent this disease?

a) Screening of all blood donors

b) Avoiding getting a shave from barber

c) Always using a disposable syringe

d) Avoiding contaminated meat

e) Prevention of faecal contamination of food and water

Key:	65.b)	66.b)	67.e)

68. After a full 3 doses course of Hepatitis B vaccine, detection of which one of the following in the blood test indicates successful uptake of vaccine:

a) HBsAg

b) Anti-HBcAg

c) Anti-HBsAg

d) IgM antibodies

e) IgG antibodies

69. Early case detection is an important activity for the prevention of sexually transmitted diseases. One of the methods for early detection is:

a) Cluster testing

b) Monitoring

c) Evaluation

d) Legislation

e) Social service

70. A pregnant woman wants protection against tetanus neonatorum for her coming baby. Out of the following which is the best preventive measure?

a) One injection of anti tetanus serum to mother

b) Two injections of anti tetanus serum to baby

c) Three injections of tetanus toxoid to mother

d) Three injections of tetanus toxoid to new born

e) A course of antibiotic to mother

Key:	68.c)	69.a)	70.c)

71. **A 3-year-old child developed a minute pinkish discrete rash. There was enlargement of post-auricular and posterior cervical lymph nodes. There was no fever. The likely diagnosis is:**
   a) Measles
   b) Mumps
   c) Rubella
   d) Infectious mononucleosis
   e) Chickenpox

72. **The most appropriate test for confirmation of poliomyelitis is:**
   a) Blood examination for viraemia
   b) Stool test for poliomyelitis virus
   c) Serological test to detect antibodies against poliomyelitis virus
   d) Western blot test
   e) ELISA test

73. **A 7-year-old boy was brought to a district head quarter hospital with the history of acute onset of fever. On examination, petechiae and echymosis were found on the skin. Laboratory investigation revealed thrombocytopenia and raised hematocrit values. The most likely diagnosis is:**
   a) Classical dengue fever
   b) Dengue haemorrhagic fever
   c) Japanese encephalitis
   d) Yellow fever
   e) German measles

Key:	71.c)	72.b)	73.b)

74. **The doctor in charge of a basic health unit advised the farmers not to walk bare footed in the fields. This advice will help in prevention of:**
   a) Ascariasis
   b) Deaconculiasis
   c) Enterobiasis
   d) Ancylostomiasis
   e) Lymphogranuloma venereum

75. **A child is born with cataract, cardiac malformation, and deafness. This infant is likely to have:**
   a) IgM rubella antibodies
   b) Ig G measles antibodies
   c) Ig M measles antibodies
   d) Ig A toxoplasmosis antibodies
   e) Ig M toxoplasmosis antibodies

76. **A mother brought her 7 days old baby with the history of fits and inability to feed for the last two days. On examination the baby was noticed to have frequent fits in which arms and legs were flexed with jerky movements. The child was unable to open her mouth. What is the most likely diagnosis?**
   a) Hypocalcemia
   b) Meningitis
   c) Tetanus neonatorum
   d) Encephlopathy
   e) Cerebral palsy

Key:	74.d)	75.a)	76.c)

77. **Choose the best option regarding the relationship between HIV and tuberculosis.**

a) HIV positive individuals are 30 to 50 times more likely to develop active tuberculosis than HIV negative people

b) The risk of getting tuberculosis is same as in HIV negative individuals

c) The risk of getting tuberculosis is less in HIV positive individuals

d) There is more chance of getting extra pulmonary tuberculosis, while risk of getting pulmonary tuberculosis will be less

e) The tuberculin test to identify infection with tubercle bacilli will always be positive in HIV positive individuals

78. **A pregnant woman was tested positive for HIV. She is worried about her coming child. In this scenario, choose the best option.**

a) She should breastfeed her baby

b) In the absence of any intervention, rate of HIV transmission from mother to child is 20 to 25%

c) Transmission of HIV from mother to child cannot be prevented by anti-retroviral drugs prophylaxis

d) Caesarian section is contraindicated due to risk of infecting the new born

e) HIV cannot pass through placenta, so there is no additional risk of infection to the new born

79. **A health planner recommended following options for the prevention of tetanus. Choose the most cost-effective option.**

a) Use of tetanus toxoid immunization

b) Antibiotics

c) Surgical cleaning of the wound

d) Aseptic measures in operation theatres

e) Mass awareness campaigns

Key:	77.a)	78.b)	79.a)

80. **A doctor is attending an HIV-AIDS patient. His/her maximum risk of getting this disease from the patient is during:**

a) Examining the patient

b) Giving the injection

c) Giving the intravenous fluid

d) Recapping the needle

e) Handling the biopsy material

81. **Gold standard test for diagnosis of pulmonary tuberculosis in a community is:**

a) X-ray chest

b) Sputum for acid fast bacilli

c) Sputum culture

d) Mantoux test

e) Axillary lymph node biopsy

82. **The main mode of transmission of hepatitis C is:**

a) Faeco oral route

b) Blood transfusion

c) Vertical transmission

d) Surgical procedure

e) Sexual contact

83. **A person received 3 doses of hepatitis B vaccine about one year back. Now he/she wants to be sure that his/her vaccination was successful. Detection of which of the following in his/her serum will be required for this purpose?**

a) HBsAg

b) Anti-HBs

c) HBcAg

d) Anti-HBc

e) Anti-HBc

Key:	80.d)	81.b)	82.b)	83.b)

84. **Congenital malformations in new born are more common if rubella occured in mother during:**
a) Child bearing age
b) First trimester
c) Second trimester
d) Third trimester
e) Perinatal period

85. **A 40-year-old male employee of a hospital came for hepatitis B vaccination. The appropriate first step in this case would be to:**
a) Give first dose of hepatitis B immunization
b) Give hepatitis B immunoglobulin
c) Give both active and passive hepatitis B immunization
d) Screen for hepatitis B exposure
e) Take history of exposure to a hepatitis B carrier

86. **Glucose is included in Oral Rehydration Salt, because:**
a) It gives sweet taste to ORS solution
b) It is main source of energy
c) It increases the acceptability by the child
d) It helps in eliminating the rota virus from the gut of child
e) It increases the salt and water absorption

87. **In a case of food poisoning, out of following features, which one is unlikely?**
a) Sudden onset
b) Vomiting
c) Tenesmus
d) Diarrhoea
e) Secondary cases

Key:	84.b)	85.d)	86.e)	87.e)

88. **A traveller came from Kenya to Pakistan. At airport the health official found that he/she had no valid immunization certificate against yellow fever. The appropriate action in this case should be to:**
a) Immunize him/her with 17-D Yellow fever vaccine and allow him/her to enter the country
b) Place him/her on quarantine in a mosquito-proof ward for 6 days from the date of leaving the infected area
c) Conduct serological test to detect whether he/she was infected or not
d) Allow him/her to enter the country because yellow fever does not exist in Pakistan
e) Send him/her back to Kenya

89. **A non-immune person was bitten by an anopheles mosquito who had sporozoite in its salivary glands. The sign and symptoms of malaria are likely to appear after:**
a) 2 days
b) 4 days
c) 6 days
d) 8 days
e) 10 days

90. **Choose the best option regarding tetanus neonatorum.**
a) The common cause is infection of the umbilical stump after birth
b) The first symptoms are usually seen at about one month of age
c) Herd immunity protects the neonates against this disease
d) To prevent this disease, tetanus toxoid to the new born is the best option
e) It is a viral disease

Key:	88.b)	89.e)	90.a)

91. Rabies is an important health problem in many developing countries. The most logical and cost-effective approach to control this problem in an urban area is:

a) Health education of people regarding the care of dogs and prevention of rabies

b) Registration and licensing of all domestic dogs

c) Elimination of stray and ownerless dogs combined with a swift and mass immunization of at least 80% of the canine dog population of the area

d) Immediate destruction of dogs and cats bitten by rabid animals

e) Inclusion of anti-rabies immunization in expanded programme of immunization

92. A person was severely bitten by a stray dog. He had been previously vaccinated against rabies but his status of antibody titer is not known. The most appropriate line of action in this situation would be to give:

a) Three intra-muscular doses of tissue culture anti-rabies vaccine on day 0, 3, and 7

b) Three intra-muscular doses of tissue culture anti-rabies vaccine on day 0, 3, and 7 along with anti-rabies immunoglobulin as passive immunization

c) Five intra-muscular doses of tissue culture anti-rabies vaccine on day 0, 3, 7, 14, and 28

d) Five intra-muscular doses of tissue culture anti-rabies vaccine on day 0, 3, 7, 14, and 28 along with anti-rabies immunoglobulin as passive immunization

e) Anti-rabies vaccination is not required because the patient had already been immunized

Key:	91.c)	92.a)

93. A person came from southern India to Pakistan. After a few days he developed headache and fever, followed by nuchal rigidity, focal CNS signs, convulsions, and altered sensorium. ELISA test detected specific IgM antibodies for Japanes encephalitis virus in cerebrospinal fluid. The mode of transmission of this disease was:

a) Bite of infected culicine mosquitoes

b) Bite of infected anopheline mosquitoes

c) Bite of infected aedes egypti mosquitoes

d) Faeco-oral

e) Inhalation/droplet infection

94. In 2010, WHO issued revised treatment guidelines recommending earlier initiation of antiretroviral therapy, at a CD4 count of < 350 cells/mm³. This new criterion increased the total number of people medically eligible for therapy by roughly:

a) 10%

b) 30%

c) 50%

d) 70%

e) 90%

95. Choose the best option regarding maternal to foetal transmission of AIDS.

a) In the absence of any intervention, rate of transmission is almost 100%

b) Breastfeeding does not transmit the infection

c) Retroviral drug therapy to mother does not decrease the risk of transmission to the child

d) Transmission of HIV from mother to child can be prevented almost entirely by antiretroviral drug prophylaxis, elective caesarian section before onset of labour, and by refraining from breast feeding

e) HIV infected infants progress very slowly to AIDS

Key:	93.a)	94.c)	95.d)

96. Choose the best option regarding hepatitis D.

a) It infects persons independently
b) Transplacental infection is common
c) The disease manifests itself only when there is co-infection with The hepatitis B virus
d) Hepatitis B vaccine dose not offer protection
e) Common mode of transmission is faeco-oral

97. Choose the best option regarding poliomyelitis.

a) Main route of spread of infection is air-borne droplets
b) Neutralizing antibodies are never found in polio virus infection
c) All the infected children will end up in paralysis
d) It produces upper motor neuron disease
e) Most outbreaks of paralytic polio occur due to type-1 virus

98. Suppose you are in charge of a vaccination centre. A veterinary doctor wants your recommendation for pre-exposure immunization against rabies. Your recommendation for cell culture vaccine would be:

a) Multi-site 4 injections: Two injections on day 0, then on day 7 and day 14
b) 5 injections: On day 0, 3, 7, 14, and 28
c) 3 injections: On day 0, 7, 14, and booster after every 2 years
d) Only post-exposure vaccination
e) Because of high occupational risk, both active and passive immunization on yearly basis

Key:	96.c)	97.e)	98.c)

99. An 8-year-old female child was brought for vaccination against tuberculosis for the first time. Her parents belonged to a far flung area and a second visit for vaccination was unlikely. The best line of action in this situation would be to:

a) Carry out Mantoux test
b) Give direct BCG
c) Give INH as chemoprophylaxis
d) Take history of exposure to tuberculosis and if positive then ask for sputum for AFB and X-ray chest
e) Take no action

100. An international traveller was having fever at the time landing in Pakistan. Further investigation revealed H5 N1 viral infection. Choose the best option in this scenario.

a) The causative agent of this disease is haemophelese influenze
b) The major complication is viral meningitis
c) The patient should receive vaccination
d) The patient should be kept in quarantine for 10 days
e) The person is suffering from bird flu

101. Which one of the following is NOT a milk-borne disease?

a) Tuberculosis
b) Undulant fever
c) Anthrax
d) Diphtheria
e) Paratyphoid

Key:	99.b)	100.c)	101.c)

102. Which one of the following rickettsial diseases, has no skin lesion?

a) Epidemic typhus
b) Scrub typhus
c) Q fever
d) Murine typhus
e) Rocky mountain spotted fever

103. One of the cardinal features of leprosy is:

a) Hyper pigmented patches
b) Loss of cutaneus sensation like light touch in the affected area
c) Presence of spores in nasal secretions
d) Four-fold rise in antibody titer
e) Positive tuberculin test

104. The best method of case detection when the prevalence of leprosy in a community is less than 1 per 1000 is:

a) Contact survey
b) Group survey
c) School children survey
d) Vulnerable group survey
e) Mass survey

105. Both active and specific passive types of immunization are available for which of the following?

a) Tetanus and hepatitis B
b) Measles and mumps
c) Cholera and typhoid
d) Gonorrhea and syphilis
e) Tuberculosis and leprosy

Key:	102.c)	103.b)	104.a)	105.a)

106. A 5-year-old child presented with fever, cough and conjunctivitis followed by rash which started behind the ears and spread rapidly all over the body. The likely diagnosis is:

a) Measles
b) Rubella
c) Dengue fever
d) Chickenpox
e) Herpes simplex

107. Which of the following statements regarding Hepatitis C, is Not correct?

a) It may take as long as 20 years to develop into liver cancer
b) The risk of sexual and maternal-neonatal transmission is small
c) The incubation period averages 3–4 weeks
d) A low rate of secondary transmission to household contacts has been recognized
e) For health care workers it is an occupational hazard

108. The period of communicability in tetanus is:

a) 1 to 7 days
b) 7 to 14 days
c) 14 to 21 days
d) 21 to 28 days
e) None of the above because this disease is not transmitted from person to person

109. Leptospirosis can be prevented by:

a) Vaccination
b) Control of rodents
c) Cooking the meat thoroughly
d) a and b
e) a and c

Key:	106.a)	107.e)	108.e)	109.d)

110. Which of the following statements regarding tuberculosis is Not true?

a) Prevalence of infection can be detected by tuberculin test
b) High coverage with BCG makes it easy to detect prevalence of infection by tuberculin test
c) Approximately 33% of world population is infected
d) There is a deadly combination of HIV-AIDS and tuberculosis
e) Incidence of infection can be found by recent tuberculin test conversion from negative to positive

111. Congenital rubella is considered to have occurred, in a child if:

a) Ig M Rubella antibodies are detected shortly after birth
b) Ig G antibodies persist for more than 6 months after birth
c) Ig A antibodies are detected in the blood
d) a and b
e) a and c

112. A child who was not immunized against tuberculosis developed cough lasting for more than 3 weeks. Tuberculin test was done and the induration after 72 hours was 1 cm. The conclusion drawn is:

a) The test is negative
b) The test is doubtful, so it should be repeated
c) The test is positive
d) BCG should be given and the test should be repeated
e) None of the above

113. A patient is said to be suffering from multi-drug resistant tuberculosis if the mycobacteria are resistant to:

a) Rifampicin
b) Isoniazid
c) Pyrazinamide
d) a and b
e) a and c

Key:	110.b)	111.d)	112.c)	113.d)

114. Choose the best option regarding the deadly combination of Tuberculosis and HIV-AIDS.

a) TB is number one cause of death in HIV infected persons
b) HIV infection is the most potent risk factor for developing active TB
c) HIV infected persons will always develop TB
d) a and b
e) a and c

115. Choose the best schedule for hepatitis B immunization.

a) First dose at any elected date, second dose 1 month later, and third dose 6 months after the second dose
b) First dose at any elected date, second dose 1 month later, and third dose 6 months after the first dose
c) First dose at any elected date, second dose 2 month later, and third dose 8 months after the second dose
d) First dose at any elected date, second dose 1 month later, and third dose 1 year after the second dose
e) First dose at any elected date; second dose 1 month later; third dose 2 years after the second dose

116. Suppose there is an epidemic of Crimean-Congo Haemorrhagic Fever (CCHF) in Baluchistan. Out of following which one will be the appropriate preventive measure?

a) Insecticide sprays to control mosquitoes
b) Safe water supply
c) Chemoprophylaxis
d) Use of Insecticides to control ticks in sheep and cows etc
e) Immunization

Key:	114.d)	115.b)	116.d)

117. **The vector for the transmission of Crimean-Congo Haemorrhagic Fever (CCHF) is:**
a) Tick
b) Anopheles mosquito
c) Aedes mosquito
d) Glossina fly
e) Contaminated water

118. **Choose the correct statement regarding ebola disease:**
a) The case fatality is about 90%
b) It is a bacterial disease
c) The most common route of disease transmission is sexual transmission
d) Tetracycline is the drug of choice in treating this disease
e) It is endemic in Australia

119. **Arbovirus infections are:**
a) Diseases that strike aborigines of Australia
b) Arthropod-borne viral infections
c) Rickettsial diseases
d) Genetically mutant viral infections
e) Cancer causing viral infections

120. **A mother wants advice for her newborn child for prevention of measles. What is the most appropriate preventive measure in this scenario?**
a) Measles vaccine at the age of 6 months
b) Measles vaccine at the age of 9 months
c) Two doses of measles vaccine at the age of 9 months and 15 months
d) Three doses of measles vaccine at 6, 10, 14 weeks along with pentavalent vaccine
e) Specific immunoglobulin at birth

Key:	117.a)	118.a)	119.b)	120.c)

11 CHAPTER

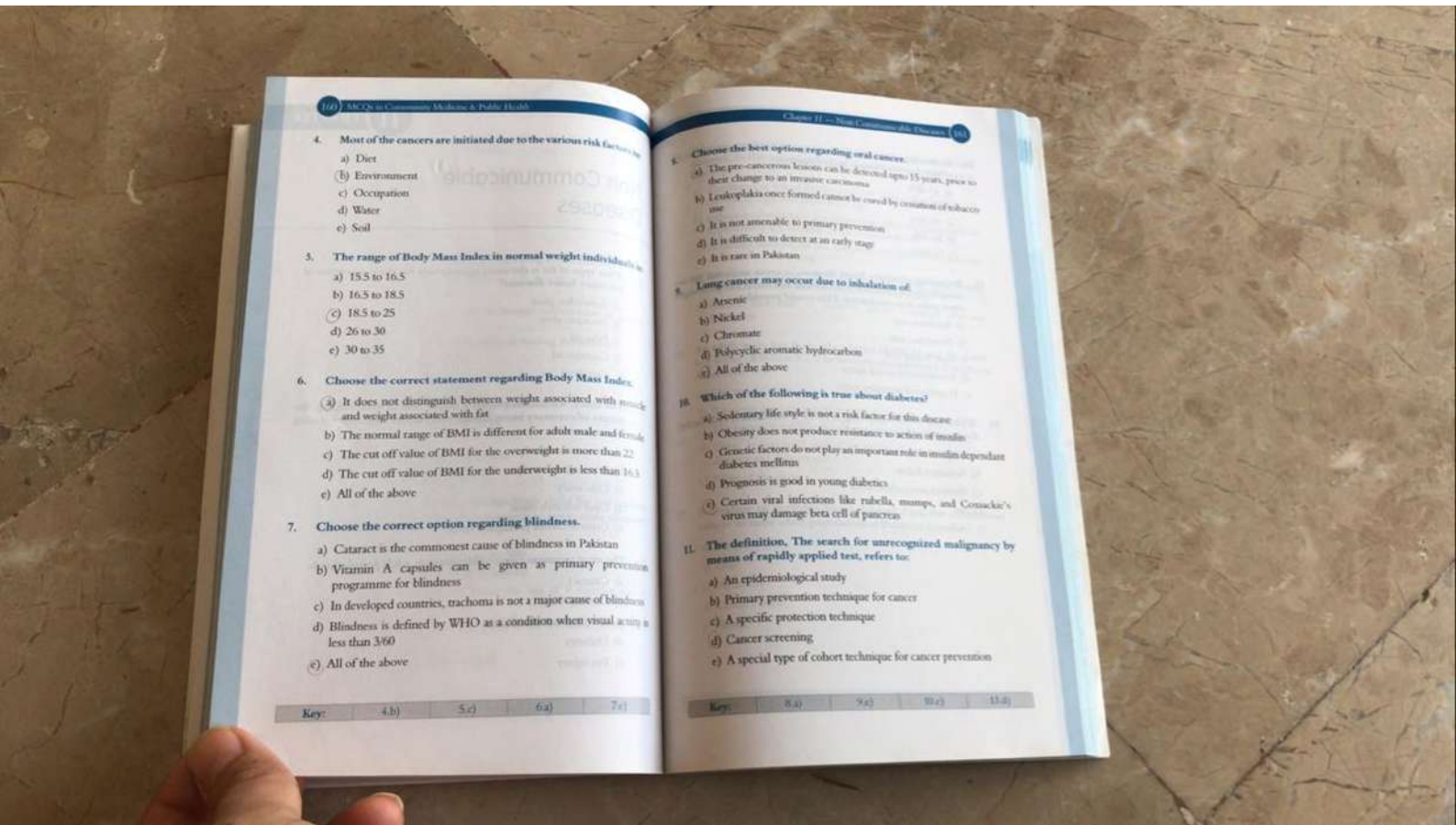
Non Communicable Diseases

1. **What type of fat is the most appropriate for the prevention of coronary heart diseases?**
a) Butter/desi ghee
b) Banaspati ghee
c) Palm oil
d) Coconut oil
e) Canola oil

2. **The study, which has played a major role in establishing the nature of coronary heart disease risk factors and their relative importance is:**
a) Case control study
b) Framingham study
c) Oslo study
d) Lipid research clinic
e) Cross-sectional prevalence study

3. **The most common cause of blindness in adult population is:**
a) Cataract
b) Corneal-ulcer
c) Cerebro-vascular disease
d) Diabetes
e) Eye injury

Key:	1.a)	2.b)	3.a)



4. **Most of the cancers are initiated due to the various risk factors by**
   a) Diet
   b) Environment
   c) Occupation
   d) Water
   e) Soil

5. **The range of Body Mass Index in normal weight individuals is:**
   a) 15.5 to 16.5
   b) 16.5 to 18.5
   c) 18.5 to 25
   d) 26 to 30
   e) 30 to 35

6. **Choose the correct statement regarding Body Mass Index:**
   a) It does not distinguish between weight associated with muscle and weight associated with fat
   b) The normal range of BMI is different for adult male and female
   c) The cut off value of BMI for the overweight is more than 22
   d) The cut off value of BMI for the underweight is less than 16.3
   e) All of the above

7. **Choose the correct option regarding blindness.**
   a) Cataract is the commonest cause of blindness in Pakistan
   b) Vitamin A capsules can be given as primary prevention programme for blindness
   c) In developed countries, trachoma is not a major cause of blindness
   d) Blindness is defined by WHO as a condition when visual acuity is less than 3/60
   e) All of the above

Key:	4.b)	5.c)	6.a)	7.c)

8. **Choose the best option regarding oral cancer.**
   a) The pre-cancerous lesion can be detected upto 15 years, prior to their change to an invasive carcinoma
   b) Leukoplakia once formed cannot be cured by cessation of tobacco use
   c) It is not amenable to primary prevention
   d) It is difficult to detect at an early stage
   e) It is rare in Pakistan

9. **Lung cancer may occur due to inhalation of:**
   a) Arsenic
   b) Nickel
   c) Chromate
   d) Polycyclic aromatic hydrocarbon
   e) All of the above

10. **Which of the following is true about diabetes?**
    a) Sedentary life style is not a risk factor for this disease
    b) Obesity does not produce resistance to action of insulin
    c) Genetic factors do not play an important role in insulin dependant diabetes mellitus
    d) Prognosis is good in young diabetics
    e) Certain viral infections like rubella, mumps, and Coxsackie's virus may damage beta cell of pancreas

11. **The definition, 'The search for unrecognized malignancy by means of rapidly applied test, refers to:**
    a) An epidemiological study
    b) Primary prevention technique for cancer
    c) A specific protection technique
    d) Cancer screening
    e) A special type of cohort technique for cancer prevention

Key:	8.a)	9.e)	10.e)	11.d)

12. **In developed countries, the proportional mortality ratio for adults due to coronary heart diseases is:**
    a) 15–20%
    b) 20–25%
    c) 25–30%
    d) 30–35%
    e) 35–40%

13. **Regarding coronary heart diseases, a cross sectional survey using ECG for evidence of infarction and history of prolonged chest pain, was conducted. This would provide:**
    a) Incidence rate
    b) Prevalence rate
    c) Case fatality rate
    d) Measurement of risk factor
    e) Proportional mortality ratio

14. **Which one of the following is NOT a modifiable risk factor for coronary heart diseases?**
    a) High blood pressure
    b) Sedentary habits
    c) Elevated serum cholesterol
    d) Age
    e) Diabetes

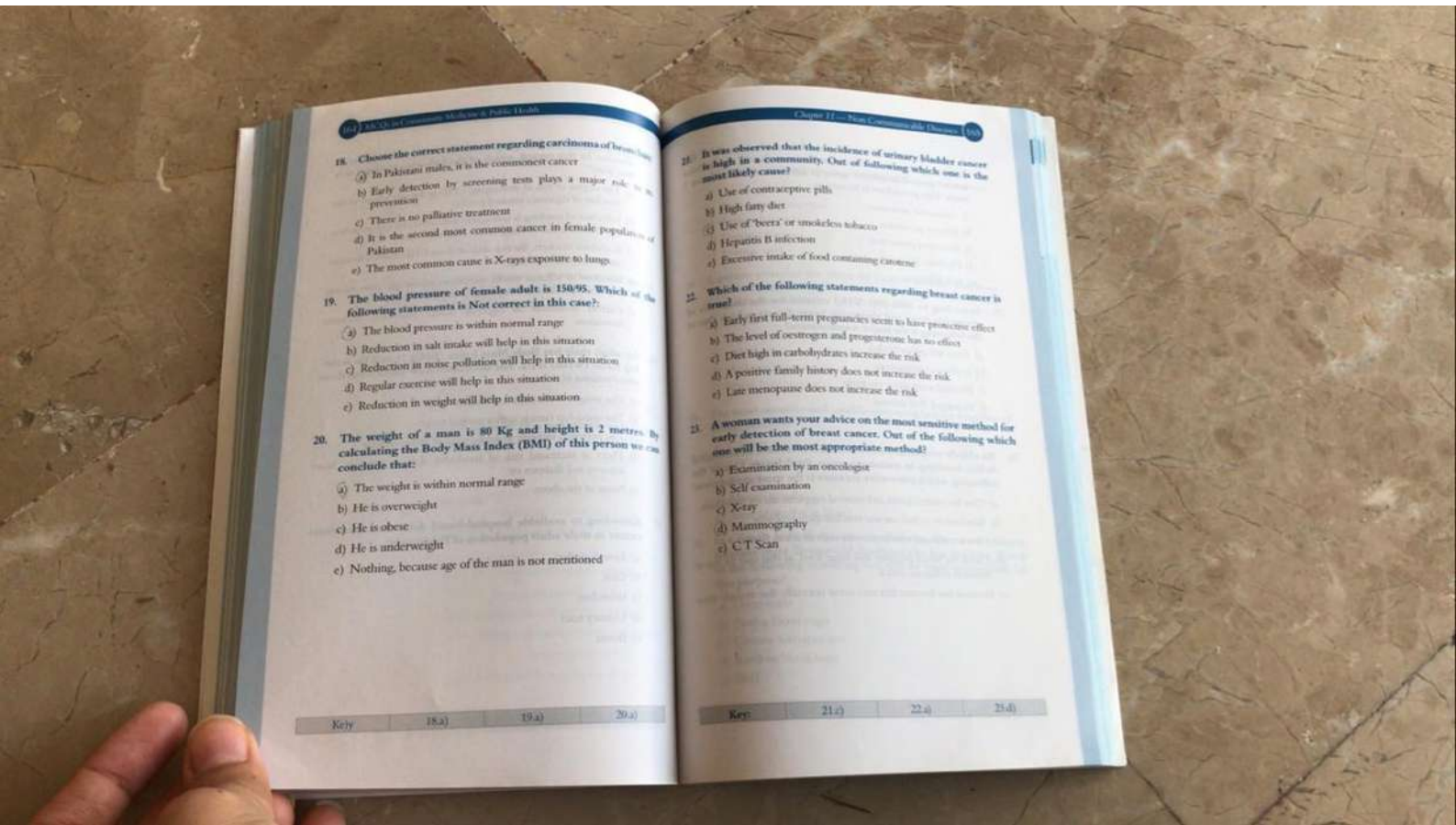
Key:	12.c)	13.b)	14.d)

15. **Tobacco smoking is a proved risk factor for coronary heart diseases. In this regard, which of the following statements is Not true?**
    a) The degree of risk of developing CHD is directly related to the number of cigarettes smoked per day
    b) Influence of smoking is synergistic with other risk factors such as hypertension and elevated serum cholesterol level
    c) In chronic smokers, the risk of death from CHD will not decrease on cessation of smoking
    d) Nicotine in tobacco smoke stimulates adrenergic drive raising the blood pressure and myocardial oxygen demand
    e) Carbon monoxide in cigarette smoke promotes atheroma formation

16. **An adult male has Body Mass Index (BMI) 31 and his waist-hip Ratio (WHR) is 1:2. The information obtained from these observations is:**
    a) The weight of the man is in normal range
    b) The waist-hip ratio is within normal range
    c) The person is unlikely to have excess of abdominal fat
    d) There is increased risk of morbidity due to coronary heart diseases and diabetes etc
    e) None of the above

17. **According to available hospital-based data, the commonest cancer in male adult population of Pakistan is:**
    a) Lymph nodes
    b) Oral
    c) Bronchus
    d) Urinary tract
    e) Bones

Key:	15.c)	16.d)	17.c)



18. **Choose the correct statement regarding carcinoma of breast, [illegible]**
a) In Pakistani males, it is the commonest cancer
b) Early detection by screening tests plays a major role in its prevension
c) There is no palliative treatment
d) It is the second most common cancer in female population of Pakistan
e) The most common cause is X-rays exposure to lungs

19. **The blood pressure of female adult is 150/95. Which of the following statements is Not correct in this case?:**
a) The blood pressure is within normal range
b) Reduction in salt intake will help in this situation
c) Reduction in noise pollution will help in this situation
d) Regular exercise will help in this situation
e) Reduction in weight will help in this situation

20. **The weight of a man is 80 Kg and height is 2 metres. By calculating the Body Mass Index (BMI) of this person we can conclude that:**
a) The weight is within normal range
b) He is overweight
c) He is obese
d) He is underweight
e) Nothing, because age of the man is not mentioned

Key:	18.a)	19.a)	20.a)

21. **It was observed that the incidence of urinary bladder cancer is high in a community. Out of following which one is the most likely cause?**
a) Use of contraceptive pills
b) High fatty diet
c) Use of 'beera' or smokeless tobacco
d) Hepatitis B infection
e) Excessive intake of food containing carotene

22. **Which of the following statements regarding breast cancer is true?**
a) Early first full-term pregnancies seem to have protective effect
b) The level of oestrogen and progesterone has no effect
c) Diet high in carbohydrates increase the risk
d) A positive family history does not increase the risk
e) Late menopause does not increase the risk

23. **A woman wants your advice on the most sensitive method for early detection of breast cancer. Out of the following which one will be the most appropriate method?**
a) Examination by an oncologist
b) Self examination
c) X-ray
d) Mammography
e) C T Scan

Key:	21.c)	22.a)	23.d)

24. **A school going child was diagnosed for rheumatic fever. She was given one intra-muscular injection of benzathine benzyl penicillin 600,000 units at interval of 3 weeks for 5 years. This procedure is known as:**
   a) Primordial prevention
   b) Primary prevention
   c) Secondary prevention
   d) Disability limitation
   e) Rehabilitation

25. **According to 2002–2003 WHO criteria for the diagnosis of rheumatic fever and rheumatic heart disease, which one of the following is the major manifestation?**
   a) Fever and polyarthralgia
   b) Erythema marginatum
   c) Elevated acute phase reactants
   d) Prolonged P-R interval
   e) Positive throat culture

26. **An elderly woman had a sudden focal reversible neurological deficit resulting in unconsciousness for 2 hours. Out of the following, which preventive measure is the most appropriate?**
   a) Give her multivitamin and mineral supplements on daily basis
   b) Take history to find out any psychological problem
   c) Give her tranquilizers to prevent such attack in future
   d) Check her blood pressure and sugar level, as this may be due to transient ischaemic attack
   e) Reassure her because this may occur normally due to daily stress

Key:	24.c)	25.b)	26.d)

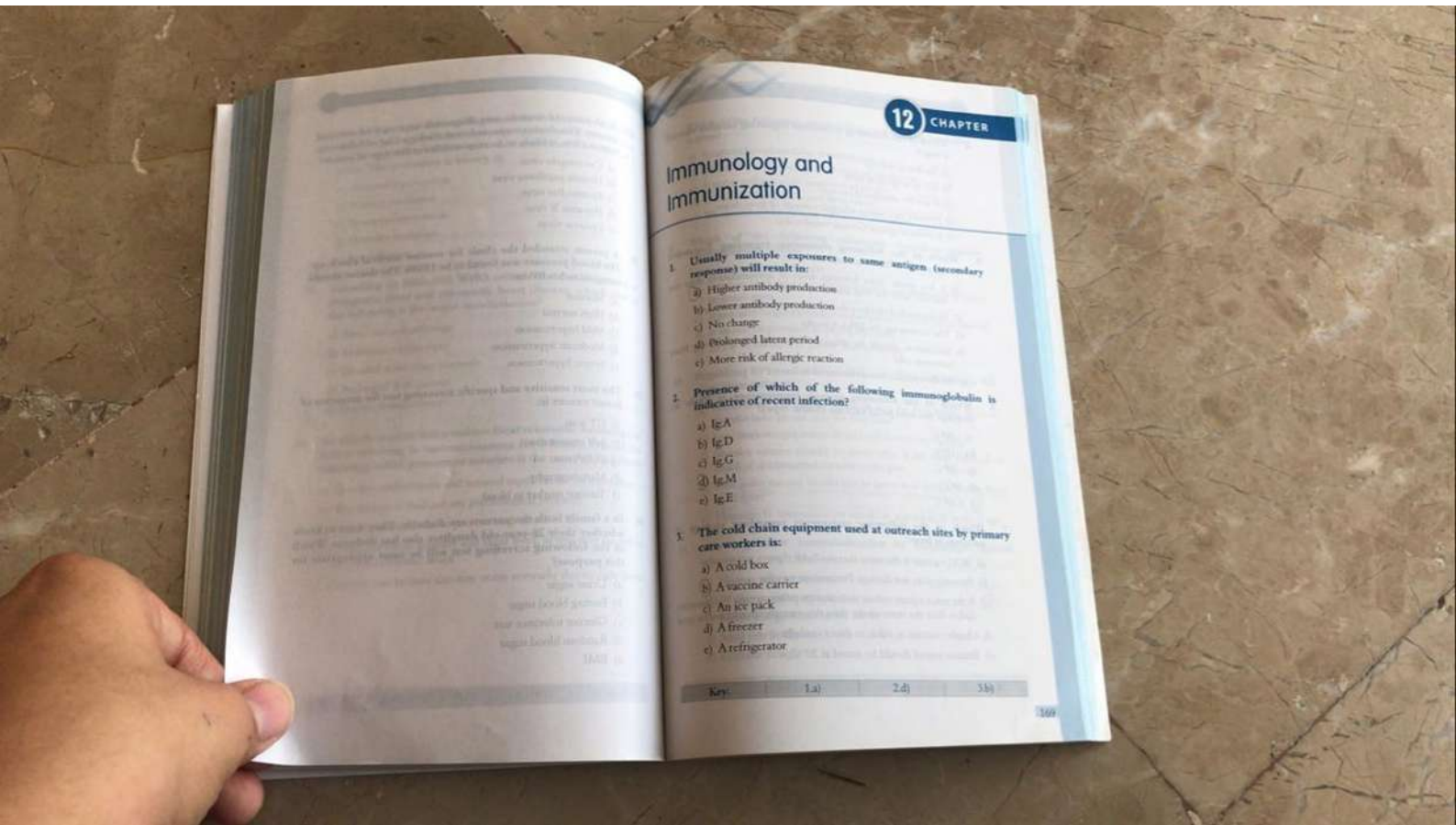
27. **A 45-year-old woman was diagnosed as a case of cervical cancer. The doctor suspected viral etiology. Out of following, which virus is likely to be responsible for this type of cancer?**
   a) Cytomegalo virus
   b) Human papilloma virus
   c) Epstein-Bar virus
   d) Hepatitis B virus
   e) Lyssavac virus

28. **A person attended the clinic for routine medical check-up. His blood pressure was found to be 155/80. The doctor should categorize his BP as:**
   a) Normal
   b) High normal
   c) Mild hypertension
   d) Moderate hypertension
   e) Severe hypertension

29. **The most sensitive and specific screening test for detection of breast cancer is:**
   a) CT scan
   b) Self examination
   c) ELISA test
   d) Mammography
   e) Tumour marker in blood

30. **In a family both the parents are diabetic. They want to know whether their 28-year-old daughter also has diabetes. Which of the following screening test will be most appropriate for this purpose?**
   a) Urine sugar
   b) Fasting blood sugar
   c) Glucose tolerance test
   d) Random blood sugar
   e) BMI

Key:	27.b)	28.c)	29.d)	30.c)



12 CHAPTER

Immunology and Immunization

1. **Usually multiple exposures to same antigen (secondary response) will result in:**
   a) Higher antibody production
   b) Lower antibody production
   c) No change
   d) Prolonged latent period
   e) More risk of allergic reaction

2. **Presence of which of the following immunoglobulin is indicative of recent infection?**
   a) IgA
   b) IgD
   c) IgG
   d) IgM
   e) IgE

3. **The cold chain equipment used at outreach sites by primary care workers is:**
   a) A cold box
   b) A vaccine carrier
   c) An ice pack
   d) A freezer
   e) A refrigerator

Key:	1.a)	2.d)	3.b)

4. **Which of the following statements regarding measles vaccine is true?**
   a) Its dose is 0.05 ml
   b) It is to be given at birth
   c) It is a live attenuated vaccine
   d) Primary vaccination schedule consists of three doses
   e) It protects against German measles also

5. **Which of the following statements regarding Expanded Programme of Immunization is true?**
   a) A few weeks' delay between doses of immunization does not interfere with the final immunity achieved
   b) Malnourished children should not receive immunization
   c) The starting age for EPI is 6 weeks
   d) Vaccination should be delayed if the child is suffering from common cold
   e) All the vaccines should be stored in freezer

6. **Which of the following storage temperature is likely to damage the oral polio vaccine (Sabin type)?**
   a) –20° C
   b) –15° C
   c) –10° C
   d) 0° C
   e) +10° C

7. **Which of the following statements regarding storage of vaccines is true?**
   a) BCG vaccine is the most thermo-liable
   b) Freezing does not damage Pentavalent vaccine
   c) If the inner square colour indicator on polio vaccine vial becomes darker than the outer circle, then this vaccine should not be used
   d) Measles vaccine is stable in direct sunlight
   e) Tetanus toxoid should be stored at 20° C

Key:	4.c)	5.a)	6.c)	7.c)

8. **Which of the following statements regarding herd immunity is true?**
   a) It cannot be enhanced by immunization
   b) It is influenced by sub-clinical cases of the disease
   c) It is not influenced by migration of people
   d) It is not influenced by new born babies
   e) We should always aim for 100% herd immunity

9. **Which of the following statements regarding passive immunization is true?**
   a) It is immediately effective
   b) It is less likely to cause allergic reactions as compared to active immunization
   c) It provides longer protection as compared to active immunization
   d) It should be provided to all sick children
   e) EPI is an example of passive immunization

10. **Regarding EPI vaccination which one of the following is the most appropriate?**
    a) Pentavalent vaccination schedule can be continued, if three months have passed after the first dose
    b) Low birth-weight babies should not receive any vaccine
    c) Measles vaccine should be given even if the child has had an attack of documented measles in the past
    d) Oral polio vaccine should not be given to a child suffering from mild fever
    e) Hepatitis B immunization should be started at 10 years of age

11. **One important contraindication to vaccination against whooping cough is:**
    a) History of convulsions
    b) 3rd degree malnutrition
    c) History of pertussis in the family
    d) Mild febrile illness
    e) Chronic cough

Key:	8.b)	9.a)	10.a)	11.a)

12. **Out of following which vaccine can be used safely for an immuno-compromised child?**
    a) BCG vaccine
    b) Measles vaccine
    c) Oral polio vaccine
    d) Salk polio vaccine
    e) Yellow fever vaccine

13. **Herd Immunity does not protect an individual against:**
    a) Diphtheria
    b) Poliomyelitis
    c) Measles
    d) Tetanus
    e) Pertussis

14. **Dose of BCG vaccine for a neonate is:**
    a) 0.01 cc
    b) 0.05 cc
    c) 0.25 cc
    d) 0.50 cc
    e) 1.0 cc

15. **A student who has come to Pakistan from Kenya, must have a valid certificate of vaccination against:**
    a) TB
    b) Poliomyelitis
    c) Mumps
    d) Yellow fever
    e) Hepatitis B

Keys:	12.d)	13.d)	14.b)	15.d)

16. **A child is on radiation therapy for cancer. To protect him against poliomyelitis, the best option is to give:**
    a) Human normal immunoglobulin
    b) Human specific immunoglobulin
    c) Oral polio vaccine (Sabin)
    d) Inactivated Polio Vaccine (Salk)
    e) Chemotherapy with antiviral drugs

17. **All of the following are the advantages of inactivated polio vaccine (Salk), EXCEPT for:**
    a) It produces a very rapid immune response
    b) It can be given to immuno-deficient patients
    c) It can be given to those who are over 50 years of age
    d) It can be given during pregnancy
    e) It can be given to patients on steroid therapy

18. **One important benefit of measles vaccine is its short incubation period. That is why it may protect the susceptible contacts if given within:**
    a) Two days of exposure
    b) Three days of exposure
    c) Four days of exposure
    d) Five days of exposure
    e) Six days of exposure

19. **Which of the following statements regarding oral polio vaccine (Sabin) is true?**
    a) Recent studies have shown that breast-feeding impedes the effectiveness of this vaccine
    b) It induces both humoral (serum) and intestinal (local) immunity
    c) Children suffering from leukaemia should receive this vaccine
    d) This vaccine is more thermo-stable as compared to inactivated polio vaccine (Salk)
    e) The vaccinees (those who have received the vaccine) do not excrete the virus in stool

Keys:	16.d)	17.a)	18.b)	19.b)

20. **Choose the best option regarding pentavalent vaccine.**
a) It should be given subcutaneously
b) Preferred site of injection is gluteal region
c) If the child is suffering from cough and cold, the vaccine should be deferred
d) The interval between two doses should be at least 3 weeks
e) The interval between two doses should be at least 4 weeks

21. **Choose the best option regarding pertussis vaccine.**
a) It is a live and attenuated vaccine
b) Contraindication includes strong family history of epilepsy
c) Its efficacy is 100%
d) Two doses are sufficient to produce immunity
e) It should be started in a neonate

22. **A doctor, while attending a patient suffering from hepatitis B, accidentally got a prick from contaminated syringe. Which one of the following is the appropriate preventive use of Hepatitis B Immunoglobulin (HBIG) in this situation?**
a) 0.5 ml/kg body weight within 24 hours
b) 0.5 ml/kg body weight within 2 hours
c) A single dose of 0.06 ml/kg body weight, preferably within 3 days
d) 0.06 ml/kg body weight, preferably within 3 days of exposure; should be repeated after one month
e) 0.06 ml/kg body weight within one month; should be repeated after six months

Key:	20.e)	21.b)	22.d)

23. **A 1-year-old child was brought for vaccination for first time. What action should be taken?**
a) As child has come late, so no vaccine should be given
b) Give BCG vaccine, 3 doses of polio and pentavalent vaccine with one month interval. Also give two doses of measles vaccine in-between
c) Give 3 doses of polio and pentavalent vaccine, but no BCG and measles vaccine
d) Give 3 doses of tetanus toxoid instead of DPT and one dose of Measles vaccine in-between
e) Use DT instead of DPT, otherwise proceed as recommended in EPI

24. **Choose the correct option regarding BCG vaccine.**
a) Recommended storage temperature is -20°C
b) It is dead bacterial vaccine
c) It is freeze dried vaccine
d) Its dose is 0.5 ml
e) It is given subcutaneously

25. **What type of antibodies are present in mother's milk?**
a) IgG
b) IgA
c) IgM
d) IgD
e) IgE

Key:	23.b)	24.c)	25.b)

26. **Which of the following statements regarding oral polio vaccine is true?**

a) Breast-feeding interferes the immunity produced by OPV
b) The vaccinee excretes the virus and so may affect others who are also immunized thereby
c) It induces only humoral immunity
d) Leukaemia and other malignancies are no contraindication
e) The risk of vaccine-associated paralysis is one case per 1000 vaccines

27. **A mother has brought her 4-year-old child to the vaccination centre for prevention against tuberculosis. She is not sure whether the child has earlier received BCG vaccine. The vaccination card is also not available. The most appropriate method to find out whether the child has indeed received BCG is:**

a) Checking the record of vaccination centre
b) Detection of tuberculosis antibodies in the blood of the child
c) Mantoux test
d) Looking for scar mark at right deltoid region
e) Asking the mother to recall again

28. **A child, after receiving some vaccine, developed generalized convulsions that were not accompanied by focal neurological signs or symptoms. The most likely vaccine responsible for this condition is:**

a) Polio vaccine
b) BCG vaccine
c) Pertussis vaccine
d) Hepatitis A vaccine
e) Tetanus toxoid

Key:	26.b)	27.d)	28.c)

29. **A woman brought her 7 weeks old child to a primary health centre. The child was suffering from fever. The woman told that a day earlier the child had received some vaccine injection in the thigh. In this situation the most appropriate line of action should be:**

a) Reassurance and paracetamol
b) Mantoux test to rule out tuberculosis
c) Routine blood examination
d) Testing for allergic reaction
e) Anti-malarial treatment

30. **A communicable disease can be eliminated, if a high herd immunity level against that disease is achieved with the help of extensive immunization campaign. However, it said that tetanus can not be eradicated in this way, because:**

a) It does not spread from person to person
b) The vaccine is not so effective
c) Extensive vaccination coverage is not possible because of high cost of vaccine
d) The vaccination is only used for prevention of tetanus neonatorum
e) Clostridium tetanae is a quite virulent micro-organism

31. **During the inspection of a vaccination centre, the EDO Health checked the colour indicator on the vial of an oral polio vaccine. He/she found that the inner square is darker than the outer ring. It indicates that:**

a) The vaccine was stored in the recommended cold temperature
b) The vaccine should not be used as it was not kept at recommended temperature
c) The vaccine should be used after checking its potency
d) The vaccine can be used upto expiry date
e) No conclusion can be drawn

Key:	29.a)	30.d)	31.b)

32. **The doctor advised the vaccinator to give the vaccine subcutaneously in the left upper arm of a 1-year-old child. Which of the following vaccines is the child receiving?**

a) BCG vaccine
b) Pentavalent vaccine
c) Oral polio vaccine
d) Measles vaccine
e) Tetanus toxoid

33. **A cyclist met a road traffic accident resulting in lacerated wound on both the legs. His vaccination status against tetanus was not known. To protect him against tetanus, which option is the most appropriate?**

a) Give three doses of tetanus toxoid one month apart
b) Give five doses of tetanus toxoid one month apart
c) Give three doses of tetanus toxoid one month apart along with anti-tetanus serum
d) Give a single dose of anti-tetanus serum
e) A course of antibiotic is sufficient

34. **A child who lived in a remote area suffered from poliomyelitis. Previously, he/she had received full course of polio vaccine from a mobile vaccination team. What is the most probable cause of failure of vaccine in this case?**

a) There was failure of cold chain
b) The immunogenic quality of vaccine was not good
c) Child's immune system was at fault
d) The child was not well at the time of vaccination
e) Some other virus was responsible for acute flaccid paralysis

Key:	32.d)	33.c)	34.a)

35. **The ninth and the most recent vaccine that is included in Expanded Programme of Immunization for the children of developing countries:**

a) Typhoid vaccine
b) Chickenpox vaccine
c) Cholera vaccine
d) Influenza vaccine
e) Pneumococcal pneumonia vaccine

36. **A 4-months-old child is suffering from immune deficiency disease. The paediatrician advised inactivated (Salk) polio vaccine. Select the best from following options regarding this vaccine:**

a) This is live attenuated vaccine
b) It induces both humoral and intestinal (local) immunity
c) For the community, it offers no protection because the wild polio virus can still multiply in the gut and can be a source of infection to others
d) For primary or initial course only one dose is required
e) This vaccine is more likely to cause side effects than oral polio vaccine

37. **A child, after one hour of receiving pentavalent vaccine, showed flushing of the face, urticaria, sneezing, lacrimation, and angioedema. This condition is due to:**

a) Mild allergic reaction
b) Mild to moderate anaphylaxis
c) Severe anaphylaxis
d) Coincidental rubella
e) Initial stage of measles

Key:	35.e)	36.c)	37.b)

38. **A vaccinator checked the the VVM (Vaccine Vial Monitor) on the poliomyelitis vaccine vial. He observed that the colour of inner square matches with the outer circle. What should be the action of the the vaccinator?**

a) Use the vaccine
b) Discard the vaccine
c) Put the vaccine in freezer compartment of the fridge and wait till the colour changes
d) Mix the diluent and then observe the colour
e) Increase the dose

39. **Naturally acquired passive immunity is acquired:**

a) From immunization by using a potent vaccine
b) From immune serum from human donors
c) From immune horse serum
d) After recovery from illness
e) From mother to foetus through placental transfer of IgG and colostral transfer of IgA

40. **The temperature of diluents, when mixing with a freeze dried vaccine like BCG, should be:**

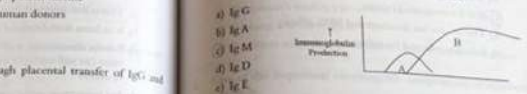
a) 0°C
b) + 2° to + 8° C
c) 10° to 15° C
d) 20° to 25° C
e) Room temperature

Key:	38.b)	39.e)	40.b)

41. **Choose the correct option regarding Ice-Lined Refrigerators (ILR):**

a) They are kept at primary health care level
b) They are lined with tubes or ice packs which are filled with water which freezes and keeps the internal temperature at + 2° C to + 8° C in case of electricity failure for hours
c) The vaccine kept in them is to be discarded if electricity is off for n hours
d) a and b
e) b and c

42. **The given figure shows the Primary Immune Response. Which type of immunoglobulin does A indicate?**

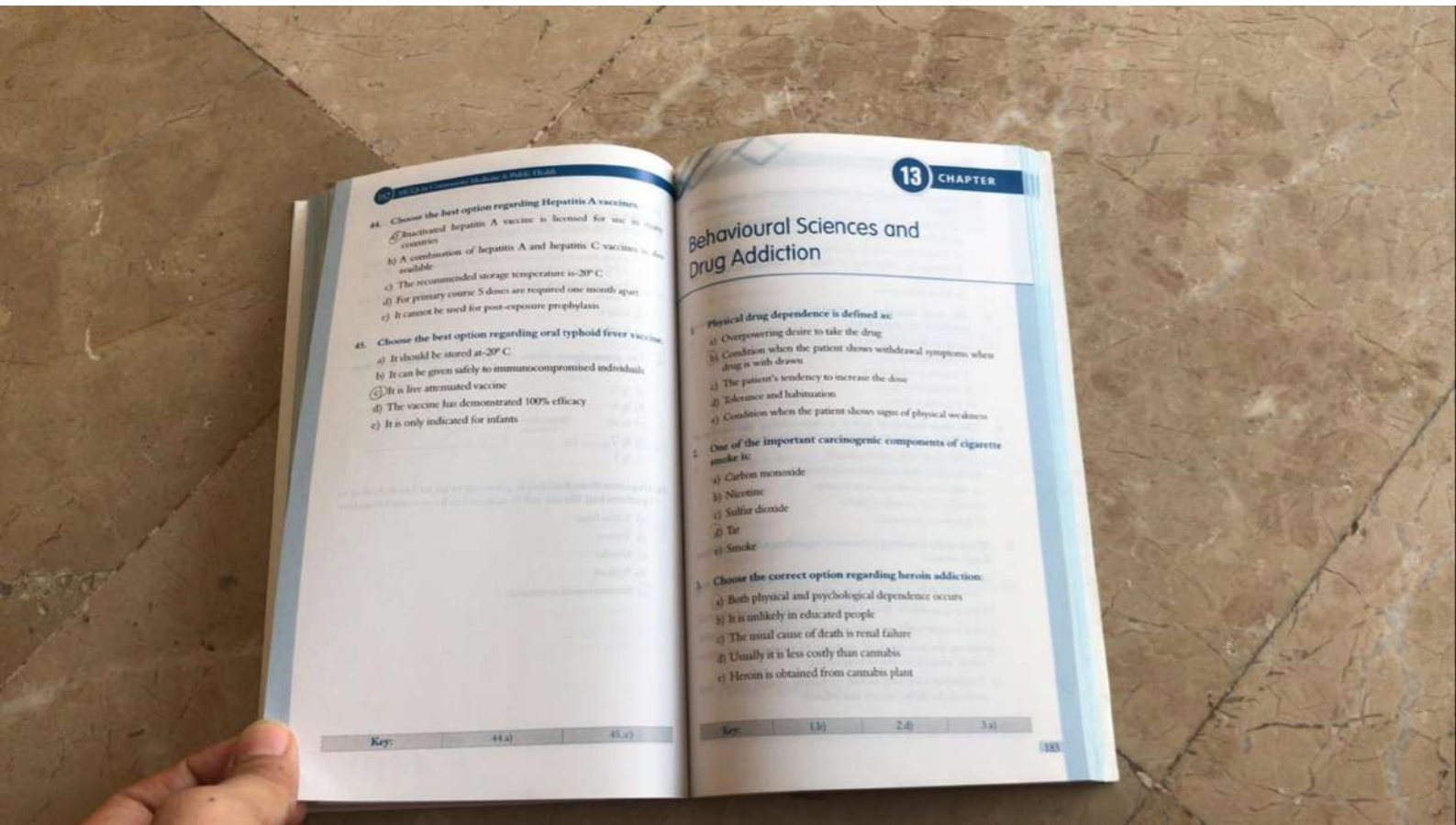


a) Ig G
b) Ig A
c) Ig M
d) Ig D
e) Ig E

43. **A person from Pakistan is planning to go to Saudi Arabia to perform hajj. He/she will be required to be vaccinated against:**

a) Yellow fever
b) Tetanus
c) Measles
d) Typhoid
e) Meningococcal meningitis

Key:	41.d)	42.c)	43.e)



182 MCQs in Community Medicine & Public Health

44. **Choose the best option regarding Hepatitis A vaccines:**
a) Inactivated hepatitis A vaccine is licensed for use in many countries
b) A combination of hepatitis A and hepatitis C vaccines is also available
c) The recommended storage temperature is-20° C
d) For primary course 5 doses are required one month apart
e) It cannot be used for post-exposure prophylaxis

45. **Choose the best option regarding oral typhoid fever vaccine:**
a) It should be stored at-20° C
b) It can be given safely to immunocompromised individuals
c) It is live attenuated vaccine
d) The vaccine has demonstrated 100% efficacy
e) It is only indicated for infants

Key:	44.a)	45.c)

13 CHAPTER

Behavioural Sciences and Drug Addiction

1. **Physical drug dependence is defined as:**
a) Overpowering desire to take the drug
b) Condition when the patient shows withdrawal symptoms when drug is with drawn
c) The patient's tendency to increase the dose
d) Tolerance and habituation
e) Condition when the patient shows signs of physical weakness

2. **One of the important carcinogenic components of cigarette smoke is:**
a) Carbon monoxide
b) Nicotine
c) Sulfur dioxide
d) Tar
e) Smoke

3. **Choose the correct option regarding heroin addiction:**
a) Both physical and psychological dependence occurs
b) It is unlikely in educated people
c) The usual cause of death is renal failure
d) Usually it is less costly than cannabis
e) Heroin is obtained from cannabis plant

Key:	1.b)	2.d)	3.a)

183

4. **Which of the following statements regarding drug addiction is true?**
   a) Cannabis is more dangerous than heroin addiction
   b) Alcohol is a stimulant
   c) The problem is on the decrease in developing countries
   d) Permanent withdrawal of drug of addiction is usually not successful
   e) None of the above

5. **The most important modifiable risk factor for increased morbidity and mortality is:**
   a) High cholesterol level
   b) Hypertension
   c) Genetic predisposition
   d) Occupational stress
   e) Cigarette smoking

6. **The most important factor in determining the success of smoking cessation programme in an individual is:**
   a) The desire of the smoker to quit
   b) Nicotine patch, as replacement therapy
   c) Behaviour modification programme
   d) Advice by a competent doctor
   e) Follow-up programme

7. **Which of the following statements regarding tobacco smoking is not correct?**
   a) The babies born to mothers who smoke, weigh on average, 200g less at birth than those born to non-smokers
   b) It is responsible for about 3 million deaths/year all over the world
   c) In developed world per capita consumption of tobacco is increasing
   d) Among the non-smokers, exposure to environmental tobacco smoke increase the risk of lung cancer
   e) Withdrawal symptoms include irritability, anxiety, craving, sleep problem, headache, tremor and lethargy

Key:	4.d)	5.e)	6.a)	7.c)

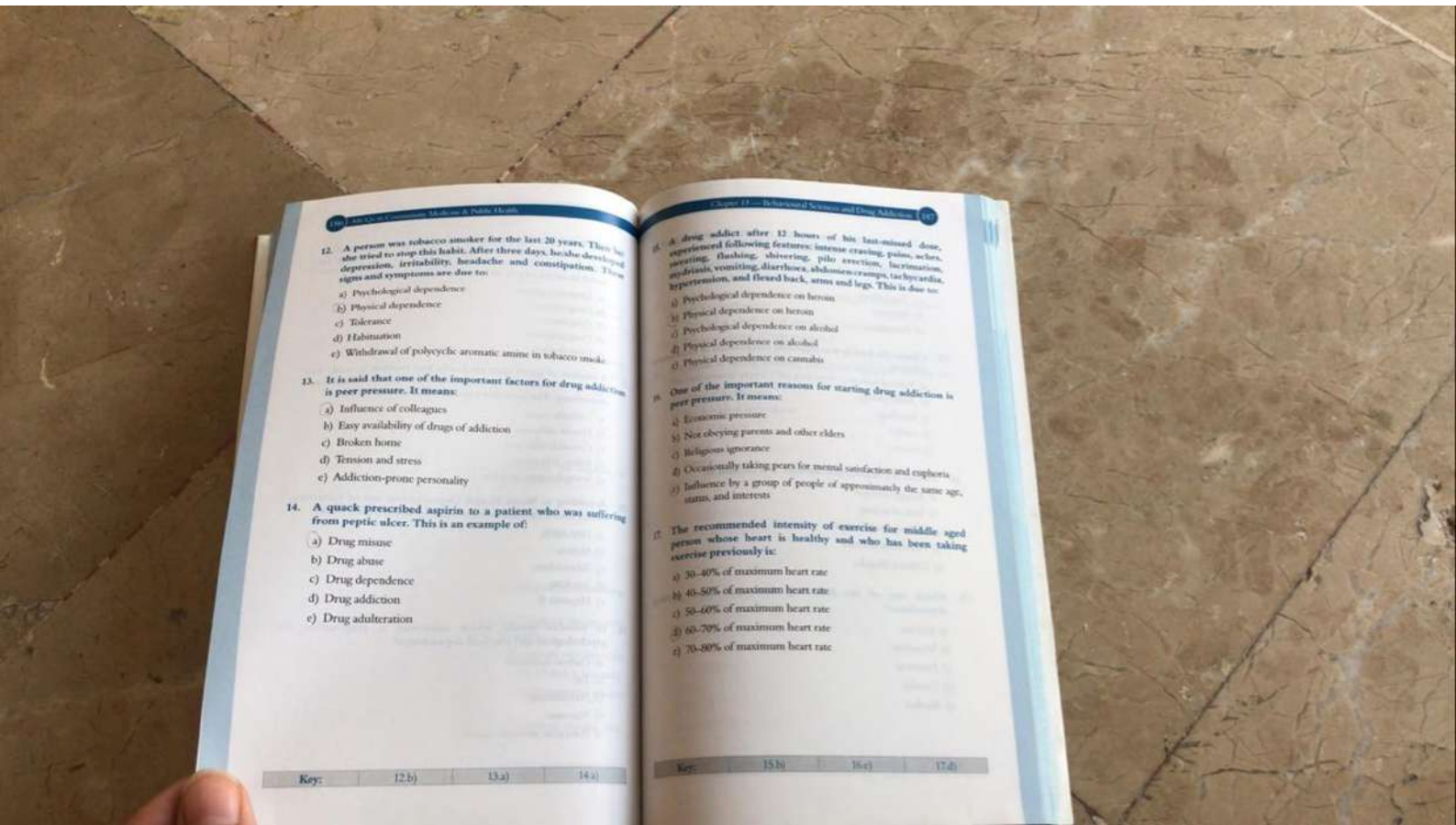
8. **The definition 'Self administration of a drug for non-medical reasons in quantities and frequencies which may impair an individual's ability to function effectively, and which may result in social, physicals or emotional harm', refers to:**
   a) Drug dependence
   b) Drug misuse
   c) Drug abuse
   d) Drug addiction
   e) Drug therapy

9. **A student of ninth class gradually lost interest in study and sports. Occasionally he/she exhibited mild tremors and drowsiness. The probable cause for this condition is:**
   a) Difficult course
   b) Heroin addiction
   c) Cannabis addiction
   d) Iodine deficiency
   e) Some domestic problem

10. **According to World Health Organization, out of following, which one is the commonest cause of death in the world:**
    a) HIV-AIDS
    b) Malaria
    c) Tuberculosis
    d) Smoking
    e) Hepatitis B

11. **In tobacco smoke which substance is responsible for psychological and physical dependence?**
    a) Carbon monoxide
    b) Tar
    c) Nitrosamine
    d) Nicotine
    e) Polycyclic aromatic amine

Key:	8.c)	9.b)	10.d)	11.d)



12. **A person was tobacco smoker for the last 20 years. Then he/she tried to stop this habit. After three days, he/she developed depression, irritability, headache and constipation. These signs and symptoms are due to:**

a) Psychological dependence
b) Physical dependence
c) Tolerance
d) Habituation
e) Withdrawal of polycyclic aromatic amine in tobacco smoke

13. **It is said that one of the important factors for drug addiction is peer pressure. It means:**

a) Influence of colleagues
b) Easy availability of drugs of addiction
c) Broken home
d) Tension and stress
e) Addiction-prone personality

14. **A quack prescribed aspirin to a patient who was suffering from peptic ulcer. This is an example of:**

a) Drug misuse
b) Drug abuse
c) Drug dependence
d) Drug addiction
e) Drug adulteration

Key:	12.b)	13.a)	14.a)

15. **A drug addict after 12 hours of his last-missed dose, experienced following features: intense craving, pains, aches, sneezing, flushing, shivering, pilo erection, lacrimation, mydriasis, vomiting, diarrhoea, abdomen cramps, tachycardia, hypertension, and flexed back, arms and legs. This is due to:**

a) Psychological dependence on heroin
b) Physical dependence on heroin
c) Psychological dependence on alcohol
d) Physical dependence on alcohol
e) Physical dependence on cannabis

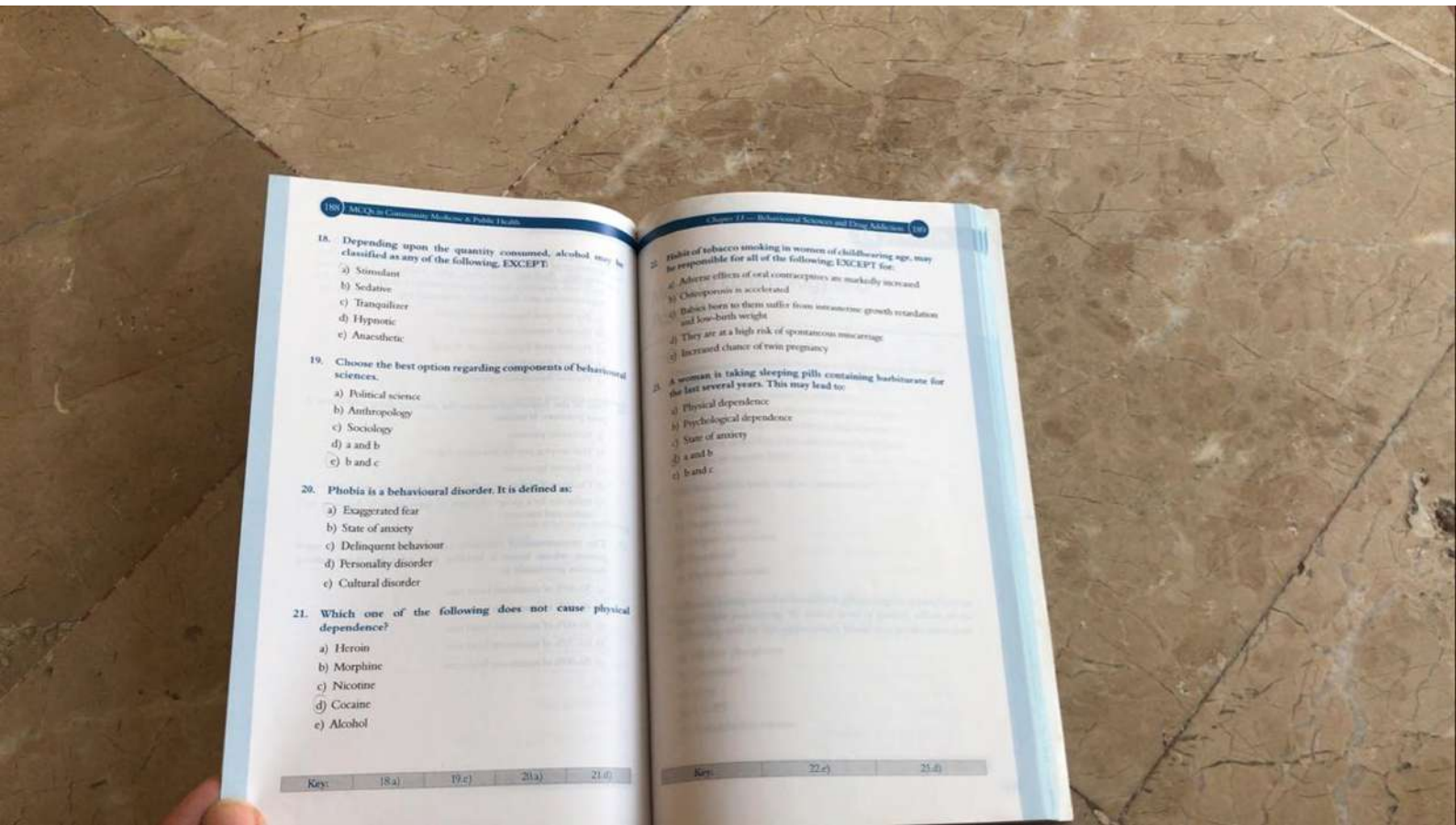
16. **One of the important reasons for starting drug addiction is peer pressure. It means:**

a) Economic pressure
b) Not obeying parents and other elders
c) Religious ignorance
d) Occasionally taking pears for mental satisfaction and euphoria
e) Influence by a group of people of approximately the same age, status, and interests

17. **The recommended intensity of exercise for middle aged person whose heart is healthy and who has been taking exercise previously is:**

a) 30–40% of maximum heart rate
b) 40–50% of maximum heart rate
c) 50–60% of maximum heart rate
d) 60–70% of maximum heart rate
e) 70–80% of maximum heart rate

Key:	15.b)	16.e)	17.d)



18. **Depending upon the quantity consumed, alcohol may be classified as any of the following, EXCEPT:**
   a) Stimulant
   b) Sedative
   c) Tranquilizer
   d) Hypnotic
   e) Anaesthetic

19. **Choose the best option regarding components of behavioural sciences.**
   a) Political science
   b) Anthropology
   c) Sociology
   d) a and b
   e) b and c

20. **Phobia is a behavioural disorder. It is defined as:**
   a) Exaggerated fear
   b) State of anxiety
   c) Delinquent behaviour
   d) Personality disorder
   e) Cultural disorder

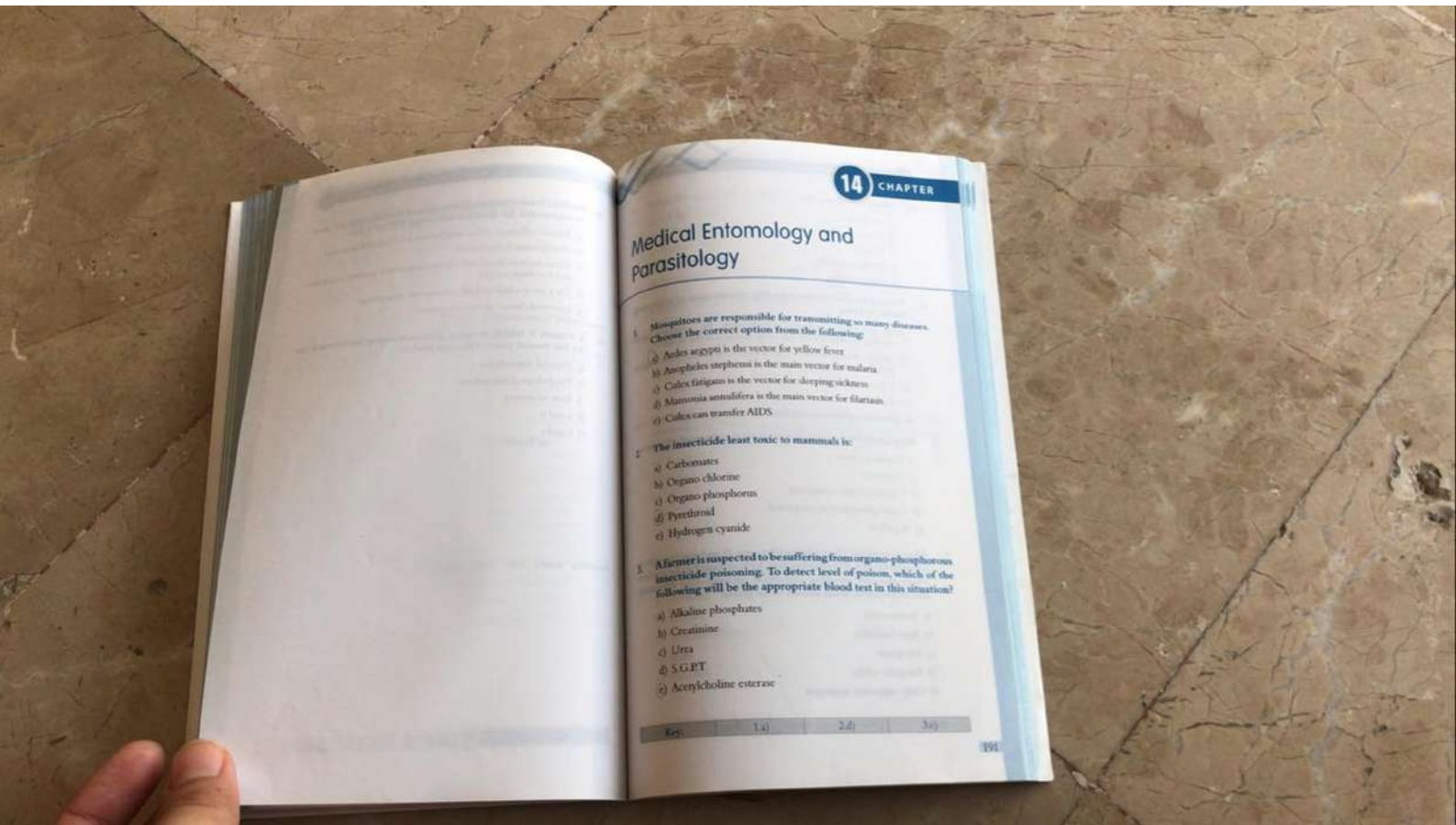
21. **Which one of the following does not cause physical dependence?**
   a) Heroin
   b) Morphine
   c) Nicotine
   d) Cocaine
   e) Alcohol

Key:	18.a)	19.e)	20.a)	21.d)

22. **Habit of tobacco smoking in women of childbearing age, may be responsible for all of the following; EXCEPT for:**
   a) Adverse effects of oral contraceptives are markedly increased
   b) Osteoporosis is accelerated
   c) Babies born to them suffer from intrauterine growth retardation and low-birth weight
   d) They are at a high risk of spontaneous miscarriage
   e) Increased chance of twin pregnancy

23. **A woman is taking sleeping pills containing barbiturate for the last several years. This may lead to:**
   a) Physical dependence
   b) Psychological dependence
   c) State of anxiety
   d) a and b
   e) b and c

Key:	22.e)	23.d)



14 CHAPTER

Medical Entomology and Parasitology

1. **Mosquitoes are responsible for transmitting so many diseases. Choose the correct option from the following:**
   a) Aedes aegypti is the vector for yellow fever
   b) Anopheles stephensi is the main vector for malaria
   c) Culex fatigans is the vector for sleeping sickness
   d) Mansonia annulifera is the main vector for filariasis
   e) Culex can transfer AIDS

2. **The insecticide least toxic to mammals is:**
   a) Carbonates
   b) Organo chlorine
   c) Organo phosphorus
   d) Pyrethroid
   e) Hydrogen cyanide

3. **A farmer is suspected to be suffering from organo-phosphorous insecticide poisoning. To detect level of poison, which of the following will be the appropriate blood test in this situation?**
   a) Alkaline phosphates
   b) Creatinine
   c) Urea
   d) S.G.P.T
   e) Acetylcholine esterase

Key:	1.a)	2.d)	3.e)

4. **Measly beef is due to:**
   a) Hydated cyst
   b) Cysticercus bovis
   c) Measles
   d) Arsenic poisoning
   e) Lead poisoning

5. **Choose the best option regarding transmission of arthropod-borne diseases.**
   a) In propagative biological transmission, the causative agents undergo multiplication and cyclic changes in the vector
   (b) In cyclo-developmental biological transmission, the causative agents undergo cyclical changes but no multiplication in the vector
   c) In pediculosis there is biological transmission
   d) House fly transmits the disease by vertical route
   e) Culex mosquito transmits filariasis by direct contact

6. **Meta-diethyl toluamide is used against arthropods. It is a/an:**
   a) Stomach poison
   b) Carbamate
   c) Organochlorine compound
   d) Organophosphorous compound
   (e) Repellent

7. **After insecticide spray a farmer became ill and was brought to a health facility. On examination, he was found to be restless. There was cold sweating, salivation, uncontrolled urination, and defaecation. What should he be given?**
   a) Barbiturates
   b) Anti-histamine
   c) Morphine
   (d) Atropine sulfate
   e) Only supportive treatment

Key:	4.b)	5.b)	6.e)	7.d)

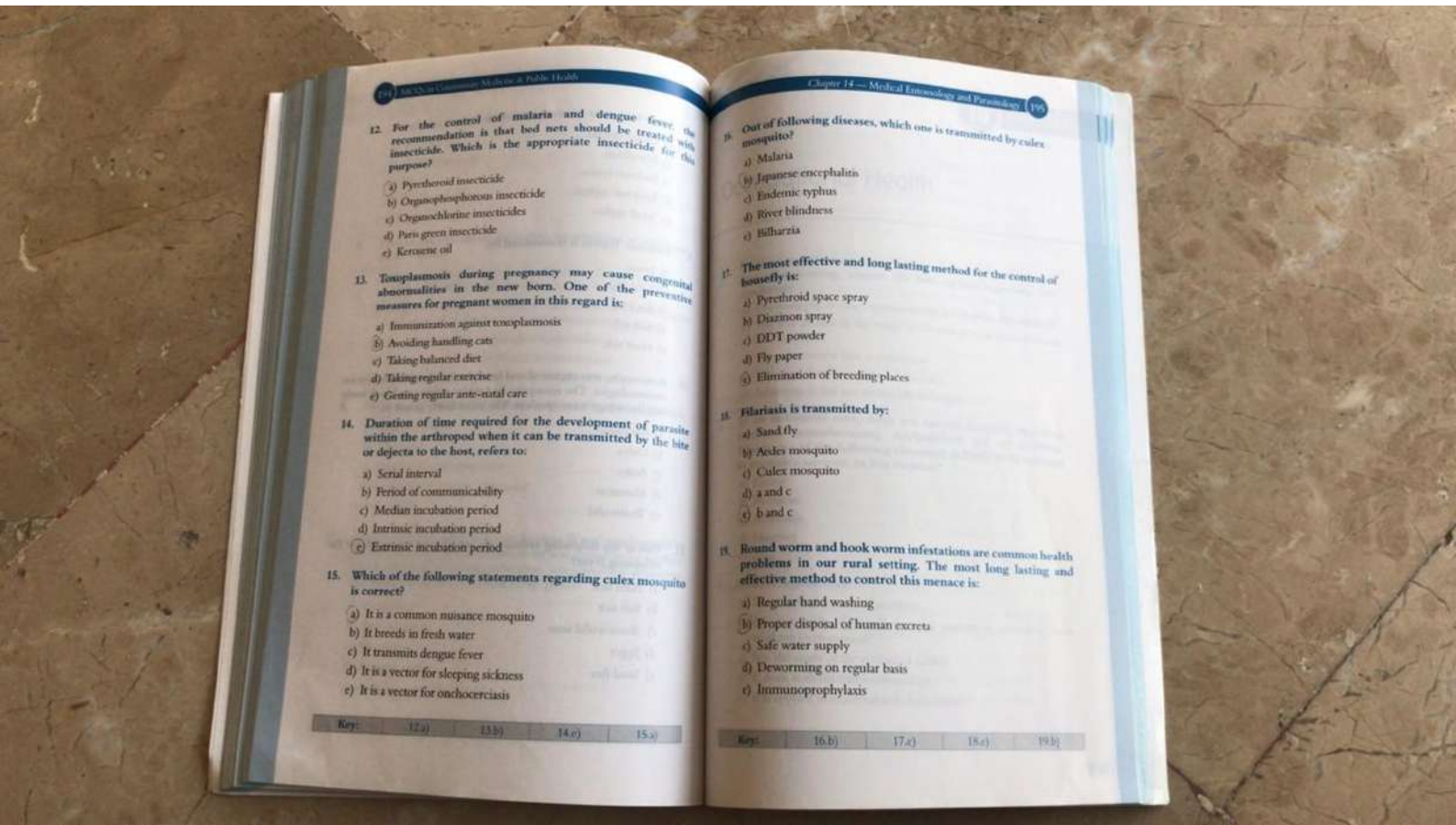
8. **Louse is a vector for transmission of:**
   a) Chagas disease
   b) Brucellosis
   c) Endemic typhus
   (d) Epidemic typhus
   e) Scrub typhus

9. **Endemic Typhus is transmitted by:**
   a) Louse
   b) Sand Fly
   (c) Rat Flea
   d) Soft tick
   e) Hard tick

10. **A mosquito was captured and brought for identification to an entomologist. The mosquito had white stripes on black body but the wings were spotless. The most likely genus is:**
    a) Anopheles
    b) Culex
    (c) Aedes
    d) Mansonia
    e) Tromiculid

11. **Out of the following arthropods, which one acts as vector for relapsing fever?**
    a) Hard tick
    (b) Soft tick
    c) Trombiculid mite
    d) Jigger
    e) Sand flea

Key:	8.d)	9.c)	10.c)	11.b)



12. **For the control of malaria and dengue fever the recommendation is that bed nets should be treated with insecticide. Which is the appropriate insecticide for this purpose?**
   a) Pyrethroid insecticide
   b) Organophosphorous insecticide
   c) Organochlorine insecticides
   d) Paris green insecticide
   e) Kerosene oil

13. **Toxoplasmosis during pregnancy may cause congenital abnormalities in the new born. One of the preventive measures for pregnant women in this regard is:**
   a) Immunization against toxoplasmosis
   b) Avoiding handling cats
   c) Taking balanced diet
   d) Taking regular exercise
   e) Getting regular ante-natal care

14. **Duration of time required for the development of parasite within the arthropod when it can be transmitted by the bite or dejecta to the host, refers to:**
   a) Serial interval
   b) Period of communicability
   c) Median incubation period
   d) Intrinsic incubation period
   e) Extrinsic incubation period

15. **Which of the following statements regarding culex mosquito is correct?**
   a) It is a common nuisance mosquito
   b) It breeds in fresh water
   c) It transmits dengue fever
   d) It is a vector for sleeping sickness
   e) It is a vector for onchocerciasis

Key:	12.a)	13.b)	14.e)	15.a)

16. **Out of following diseases, which one is transmitted by culex mosquito?**
   a) Malaria
   b) Japanese encephalitis
   c) Endemic typhus
   d) River blindness
   e) Bilharzia

17. **The most effective and long lasting method for the control of housefly is:**
   a) Pyrethroid space spray
   b) Diazinon spray
   c) DDT powder
   d) Fly paper
   e) Elimination of breeding places

18. **Filariasis is transmitted by:**
   a) Sand fly
   b) Aedes mosquito
   c) Culex mosquito
   d) a and c
   e) b and c

19. **Round worm and hook worm infestations are common health problems in our rural setting. The most long lasting and effective method to control this menace is:**
   a) Regular hand washing
   b) Proper disposal of human excreta
   c) Safe water supply
   d) Deworming on regular basis
   e) Immunoprophylaxis

Key:	16.b)	17.e)	18.e)	19.b)

15 CHAPTER

Occupational Health

1. **Pneumoconiosis is an important occupational health hazard. Out of following, choose the best option regarding this condition:**
   a) The history of chronic exposure to dust is a must for this condition
   b) The size of dust in the range of 4–6 mm is most likely to cause this condition
   c) The commonest type is anthracosis
   d) The most dangerous type is byssinosis
   e) Asbestosis is due to a thermophilic fungus

2. **In an industrial area, there are various factories including fertilizer manufacturing, refrigeration and oil refining. Which one of the following chemicals is likely to be released in excessive amount, in this location?**
   a) Ozone
   b) Phosgene
   c) Ammonia
   d) Mercury
   e) Zinc

3. **What is ergonomics?**
   a) It is a special branch of nutrition
   b) It is the study of the efficiency of workers in relation to their working environment
   c) It is the study of the ecological factors
   d) It deals with human anthropology
   e) It is applied in maternal and child health

Key:	1.a)	2.c)	3.b)

4. **Which of the following statements regarding occupational cancer is true?**
   a) Urinary bladder cancer is the most common cancer
   b) In road making, there is risk of G.I.T. cancer
   c) Leukaemia is common in nickel and chromium industry
   d) Asbestosis may give rise to mesothelioma
   e) None of the above

5. **The noise level of a workshop was 40–60 dBA. The conclusion drawn from this observation is that:**
   a) The noise level was acceptable
   b) It was high and dangerous
   c) It was too low
   d) It was inconclusive
   e) Audiometer should be used before making any decision

6. **Byssinosis is an important health problem in cotton industry. Out of following types of workers, who are more likely to get this disease?**
   a) Cotton grossers
   b) Cloth designers
   c) Cloth weavers
   d) Cloth dyers
   e) Cloth marketeers

7. **A person working in printing industry developed abdominal colic, constipation, loss of appetite, blue line on gums, and there was weakness of wrist joint. The most appropriate test would be:**
   a) Coproporphyrin in urine as screening test
   b) Blood examination for leukopenia
   c) Ultrasound of abdomen
   d) X-ray chest and complete blood examination
   e) Kidney function test and lipid profile

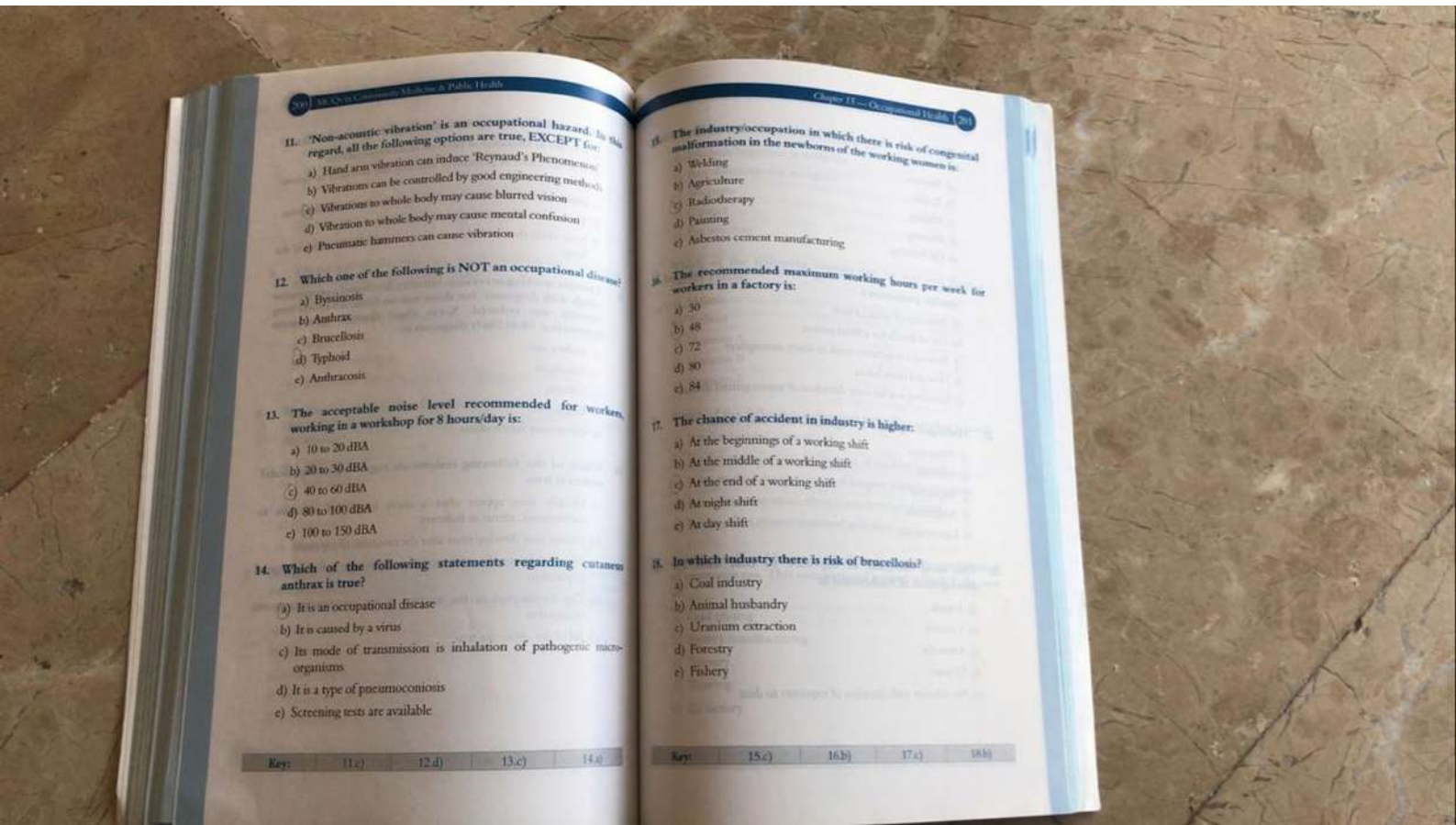
Key:	4.d)	5.a)	6.c)	7.a)

8. **Which of the following statements regarding silicosis is true?**
   a) It is due to inhalation of finely divided carbon particles
   b) It is rare cause of permanent disability and mortality in various occupations
   c) Dust particle between 0.1 to 0.3 micron are the most dangerous
   d) There is no effective treatment available
   e) X-ray chest shows black spots in apical and middle zones of the lungs

9. **A worker working in ceramic industry developed a progressive cough with dyspnoea, but there was no fever. The total lung capacity was reduced. X-ray chest showed snow-storm appearance. Most likely diagnosis is:**
   a) Anthracosis
   b) Asbestosis
   c) Silicosis
   d) Baggasosis
   e) Pulmonary tuberculosis

10. **Which of the following statements regarding occupational cancer is true:**
    a) Usually they appear after a short history of exposure to carcinogenic agents in industry
    b) Cancer may develop even after the cessation of exposure
    c) The average age of occurrence of cancer is same as that for general population
    d) The localization of the tumour is not constant in any one occupation
    e) All of the above are true

Key:	8.d)	9.c)	10.b)



11. **'Non-acoustic vibration' is an occupational hazard. In this regard, all the following options are true, EXCEPT for:**
    a) Hand arm vibration can induce 'Reynaud's Phenomenon'
    b) Vibrations can be controlled by good engineering methods
    c) Vibrations to whole body may cause blurred vision
    d) Vibration to whole body may cause mental confusion
    e) Pneumatic hammers can cause vibration

12. **Which one of the following is NOT an occupational disease?**
    a) Byssinosis
    b) Anthrax
    c) Brucellosis
    d) Typhoid
    e) Anthracosis

13. **The acceptable noise level recommended for workers, working in a workshop for 8 hours/day is:**
    a) 10 to 20 dBA
    b) 20 to 30 dBA
    c) 40 to 60 dBA
    d) 80 to 100 dBA
    e) 100 to 150 dBA

14. **Which of the following statements regarding cutaneus anthrax is true?**
    a) It is an occupational disease
    b) It is caused by a virus
    c) Its mode of transmission is inhalation of pathogenic micro-organisms
    d) It is a type of pneumoconiosis
    e) Screening tests are available

Key:	11.c)	12.d)	13.c)	14.a)

15. **The industry/occupation in which there is risk of congenital malformation in the newborns of the working women is:**
    a) Welding
    b) Agriculture
    c) Radiotherapy
    d) Painting
    e) Asbestos cement manufacturing

16. **The recommended maximum working hours per week for workers in a factory is:**
    a) 30
    b) 48
    c) 72
    d) 80
    e) 84

17. **The chance of accident in industry is higher:**
    a) At the beginnings of a working shift
    b) At the middle of a working shift
    c) At the end of a working shift
    d) At night shift
    e) At day shift

18. **In which industry there is risk of brucellosis?**
    a) Coal industry
    b) Animal husbandry
    c) Uranium extraction
    d) Forestry
    e) Fishery

Key:	15.c)	16.b)	17.c)	18.b)

19. **Which one of the following is environmentally friendly industry?**
a) Forestry
b) Textile
c) Mining
d) Printing
e) Oil Refining

20. **Which one of the following measures can be labelled as 'specific protection'?**
a) Provision of artificial limb
b) Use of Braille for a blind person
c) Wearing a respiratory mask in dusty atmosphere
d) Neat and clean habits
e) Screening test for early detection of unrecognized disease

21. **Prolonged exposure to sugarcane dust may cause:**
a) Psittacosis
b) Siderosis
c) Bagassosis
d) Anthracosis
e) Leptospirosis

22. **The usual duration of exposure to coal dust for the development of Anthracosis is:**
a) 1 week
b) 1 month
c) 4 months
d) 12 years
e) No relation with duration of exposure to dust

Key:	19.(a)	20.(c)	21.(c)	22.(d)

23. **The usual cause of miner's nystagmus is:**
a) Excessive brightness at workplace
b) Poor illumination at workplace
c) Trachoma
d) Cataract
e) Eye infection

24. **Which of the following diseases can be acquired from a barber's shop?**
a) Malaria
b) Typhoid
c) Hepatitis A
d) Hepatitis B
e) Hepatitis E

25. **Which of the following statements regarding creches is true?**
a) It is for disabled persons
b) It is for care of infants and toddler of working women
c) It is a method for prevention of hospital acquired infection
d) It is a disease in which there is involvement of brain
e) It is an effect of environmental pollution

26. **A worker suffered from chemical pneumonia due to inhalation of ammonia gas. This occupational hazard is likely to be seen in:**
a) Coal mining
b) Battery manufacturing
c) Tannery
d) Weaving
e) Ice factory

Key:	23.(b)	24.(d)	25.(b)	26.(e)

27. **In a printing press, the average noise level was measured to be 100 dB. As a medical officer what advice will you give?**
   a) This noise level is within normal range
   b) Ear plugs should be used by the workers
   c) There should be periodic medical check-ups of workers
   d) Blood pressure and history of insomnia among workers should be recorded
   e) Feedback from the workers should be taken to know whether they feel uncomfortable working in this environment

28. **A coal mine worker suffered from miner's nystagmus. This condition is due to working in:**
   a) Dusty atmosphere
   b) Poor illumination
   c) Hot and humid condition
   d) High atmospheric pressure
   e) Allergy to coal dust

29. **In various industries 'local exhaust ventilation' is recommended. Choose the best option in this regard.**
   a) The heart of this device is the hood which is placed as near as possible to the point of origin of the dust or other harmful fumes
   b) The fresh air is propelled in the working environment by using propellers
   c) In this device the air temperature and humidity is controlled
   d) The device should be operated not more than 4 hours/day
   e) This device requires special respirators to protect the workers

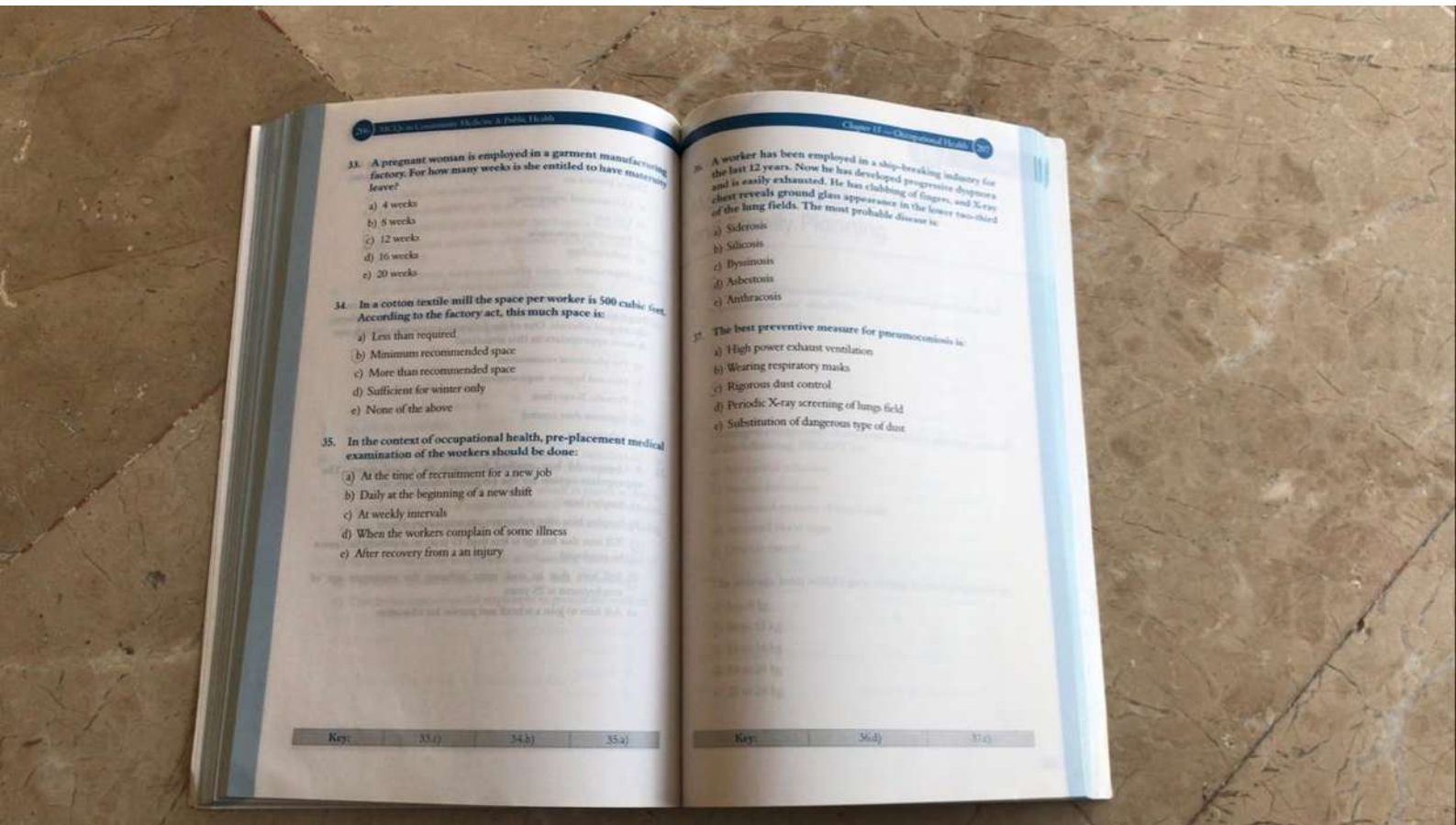
Key:	27.b)	28.b)	29.a)

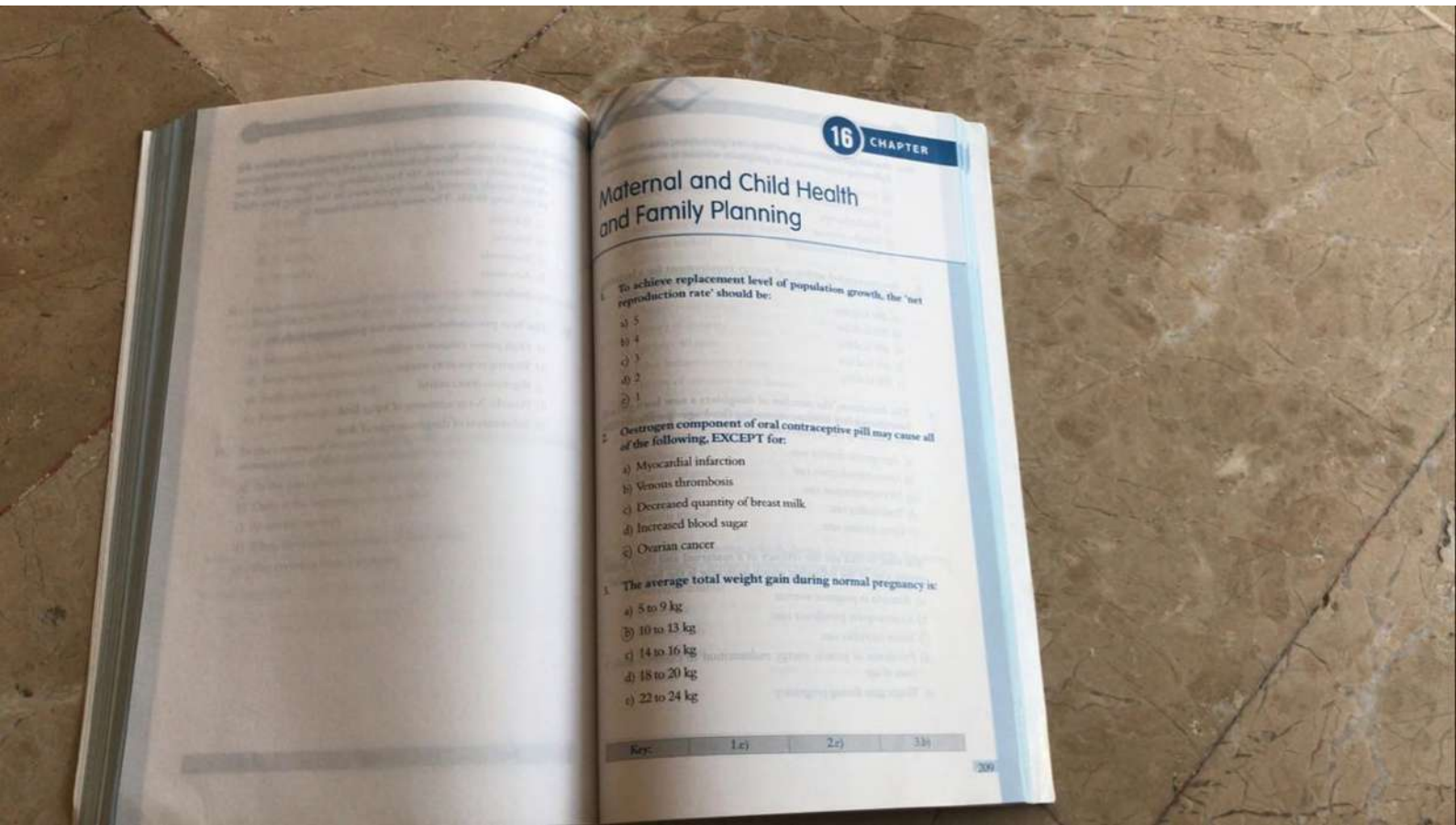
30. **In context of occupational health, it is desirable to design the machine, equipment, and process to suit the human anatomy. This is known as:**
   a) Occupational engineering
   b) Crèches
   c) Primordial prevention
   d) Anthropology
   e) Ergonomics

31. **Suppose you are a newly employed medical officer in a large stone-cutting factory. In last few months, five workers developed silicosis. Out of the following measures, which one is most appropriate in this situation?**
   a) Pre-placement examination
   b) Personal hygiene improvement
   c) Periodic X-ray chest
   d) Rigorous dust control
   e) Substitution

32. **A 14-year-old boy applied for work in a coal mine. The appropriate option for the employer should be to:**
   a) Employ him
   b) Employ him after ruling out any respiratory disease
   c) Tell him that his age is less than 15 years so at present he cannot be employed
   d) Tell him that in coal mine industry the minimum age of employment is 25 years
   e) Ask him to join a school and pursue his education

Key:	30.e)	31.d)	32.c)


33. A pregnant woman is employed in a garment manufacturing factory. For how many weeks is she entitled to have maternity leave?
a) 4 weeks
b) 8 weeks
c) 12 weeks
d) 16 weeks
e) 20 weeks
34. In a cotton textile mill the space per worker is 500 cubic feet. According to the factory act, this much space is:
a) Less than required
b) Minimum recommended space
c) More than recommended space
d) Sufficient for winter only
e) None of the above
35. In the context of occupational health, pre-placement medical examination of the workers should be done:
a) At the time of recruitment for a new job
b) Daily at the beginning of a new shift
c) At weekly intervals
d) When the workers complain of some illness
e) After recovery from a an injury
Key: 33.c) 34.b) 35.a)
36. A worker has been employed in a ship-breaking industry for the last 12 years. Now he has developed progressive dyspnoea and is easily exhausted. He has clubbing of fingers, and X-ray chest reveals ground glass appearance in the lower two-third of the lung fields. The most probable disease is:
a) Siderosis
b) Silicosis
c) Byssinosis
d) Asbestosis
e) Anthraconis
37. The best preventive measure for pneumoconiosis is:
a) High power exhaust ventilation
b) Wearing respiratory masks
c) Rigorous dust control
d) Periodic X-ray screening of lungs field
e) Substitution of dangerous type of dust
Key: 36.d) 37.c)



16 CHAPTER

Maternal and Child Health and Family Planning

1. **To achieve replacement level of population growth, the 'net reproduction rate' should be:**
   a) 5
   b) 4
   c) 3
   d) 2
   e) 1

2. **Oestrogen component of oral contraceptive pill may cause all of the following, EXCEPT for:**
   a) Myocardial infarction
   b) Venous thrombosis
   c) Decreased quantity of breast milk
   d) Increased blood sugar
   e) Ovarian cancer

3. **The average total weight gain during normal pregnancy is:**
   a) 5 to 9 kg
   b) 10 to 13 kg
   c) 14 to 16 kg
   d) 18 to 20 kg
   e) 22 to 24 kg

Key:	1.c)	2.e)	3.b)

4. **For the prevention of low birth-weight babies, which one of the following intervention in pregnant women is recommended?**
   a) Control of various infections
   b) Genetic counselling
   c) Psychotherapy
   d) Regular exercise
   e) Tetanus immunization

5. **Recommended additional energy requirement for a lactating mother who is nursing her 3-months old baby is:**
   a) 200 kcal/day
   b) 300 kcal/day
   c) 400 kcal/day
   d) 600 kcal/day
   e) 800 kcal/day

6. **The definition, 'the number of daughters a new born girl will bear during her lifetime assuming fixed age specific fertility and mortality rate', refers to:**
   a) Age specific fertility rate
   b) Gross reproduction rate
   c) Net reproduction rate
   d) Total facility rate
   e) Gross fertility rate

7. **You want to find out the efficacy of a maternal and child health centre. Out of the following which indicator is the best option?**
   a) Anaemia in pregnant women
   b) Contraceptive prevalence rate
   c) Infant mortality rate
   d) Prevalence of protein energy malnutrition in children under 5 years of age
   e) Weight gain during pregnancy

Key:	4.a)	5.d)	6.c)	7.c)

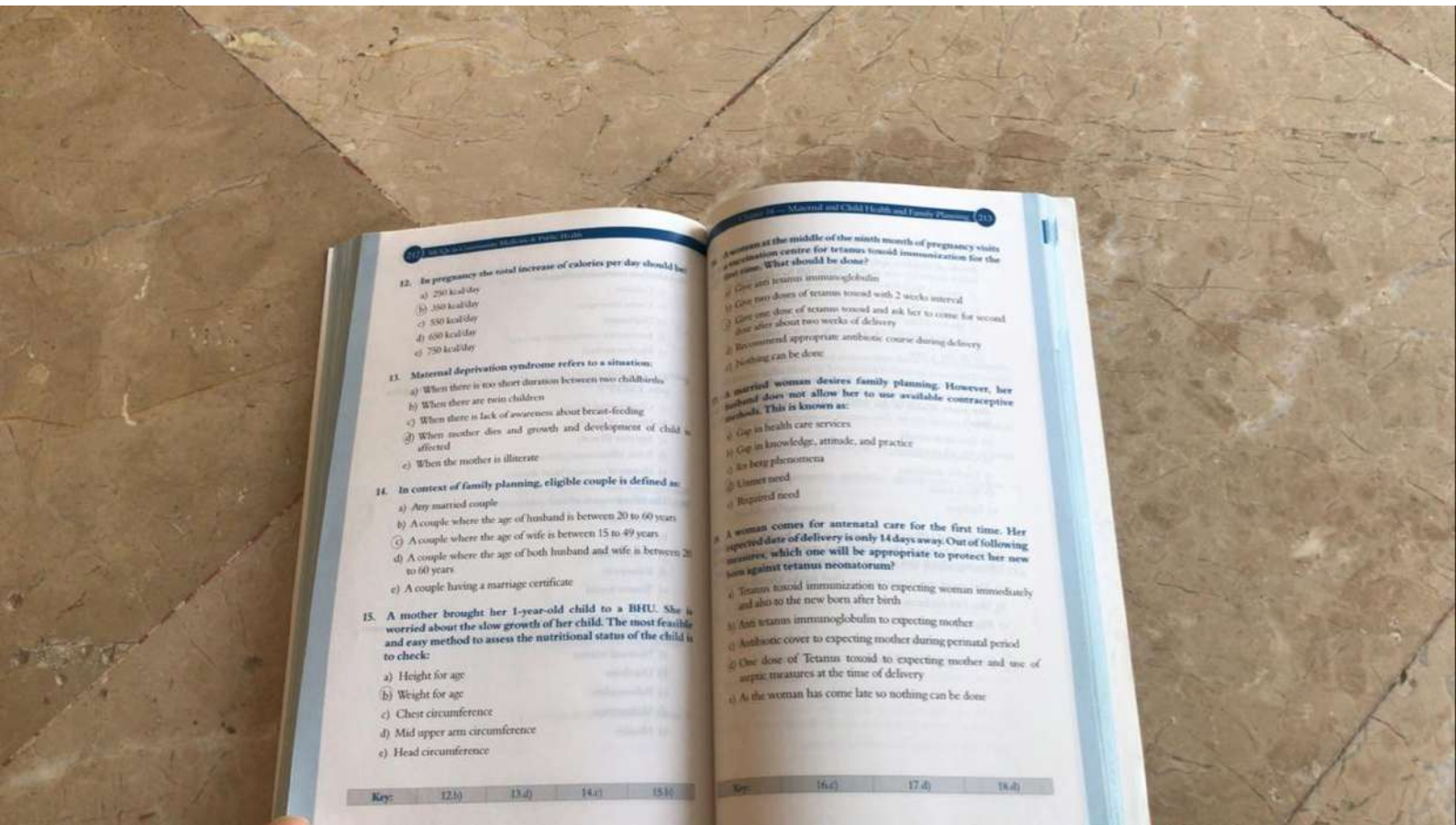
8. **Suspected pregnancy and pelvic inflammatory diseases are absolute contraindication for:**
   a) Condom
   b) Coitus interruptus
   c) Diaphragm
   d) Intrauterine contraceptive devices
   e) Rhythm method

9. **All of the follwing are contraindications for oral contraceptive pills, EXCEPT:**
   a) Chronic renal disease
   b) History of diabetes
   c) Age over 40 years
   d) Pelvic inflammatory disease
   e) History of coronary heart diseases

10. **The effectiveness of oral contraceptives is reduced by:**
    a) Erythrosine
    b) Pyridoxine
    c) Cyancobalamine
    d) Rifampicin
    e) Tetanus toxoid

11. **Out of the following, which factor is responsible for most deaths among children in developing countries?**
    a) Neonatal tetanus
    b) Diarrhoea
    c) Poliomyelitis
    d) Malnutrition
    e) Measles

Key:	8.a)	9.d)	10.d)	11.b)



12. **In pregnancy the total increase of calories per day should be:**
a) 250 kcal/day
b) 350 kcal/day
c) 550 kcal/day
d) 650 kcal/day
e) 750 kcal/day

13. **Maternal deprivation syndrome refers to a situation:**
a) When there is too short duration between two childbirths
b) When there are twin children
c) When there is lack of awareness about breast-feeding
d) When mother dies and growth and development of child is affected
e) When the mother is illiterate

14. **In context of family planning, eligible couple is defined as:**
a) Any married couple
b) A couple where the age of husband is between 20 to 60 years
c) A couple where the age of wife is between 15 to 49 years
d) A couple where the age of both husband and wife is between 20 to 60 years
e) A couple having a marriage certificate

15. **A mother brought her 1-year-old child to a BHU. She is worried about the slow growth of her child. The most feasible and easy method to assess the nutritional status of the child is to check:**
a) Height for age
b) Weight for age
c) Chest circumference
d) Mid upper arm circumference
e) Head circumference

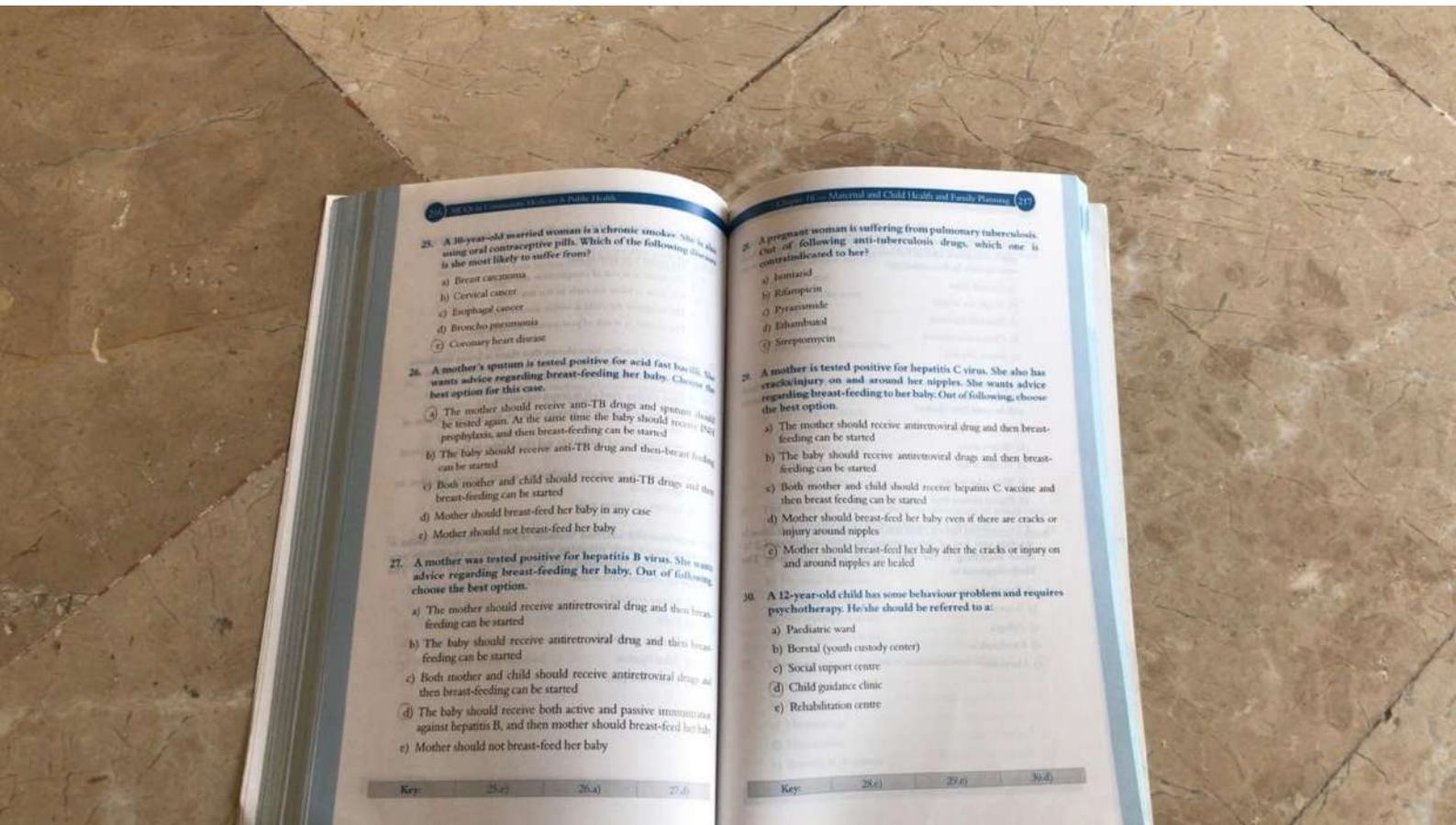
Key:	12.b)	13.d)	14.c)	15.b)

16. **A woman at the middle of the ninth month of pregnancy visits a vaccination centre for tetanus toxoid immunization for the first time. What should be done?**
a) Give anti tetanus immunoglobulin
b) Give two doses of tetanus toxoid with 2 weeks interval
c) Give one dose of tetanus toxoid and ask her to come for second dose after about two weeks of delivery
d) Recommend appropriate antibiotic course during delivery
e) Nothing can be done

17. **A married woman desires family planning. However, her husband does not allow her to use available contraceptive methods. This is known as:**
a) Gap in health care services
b) Gap in knowledge, attitude, and practice
c) Ito berg phenomena
d) Unmet need
e) Required need

18. **A woman comes for antenatal care for the first time. Her expected date of delivery is only 14 days away. Out of following measures, which one will be appropriate to protect her new born against tetanus neonatorum?**
a) Tetanus toxoid immunization to expecting woman immediately and also to the new born after birth
b) Anti tetanus immunoglobulin to expecting mother
c) Antibiotic cover to expecting mother during perinatal period
d) One dose of Tetanus toxoid to expecting mother and use of aseptic measures at the time of delivery
e) As the woman has come late so nothing can be done

Key:	16.c)	17.d)	18.d)



25. **A 30-year-old married woman is a chronic smoker. She is also using oral contraceptive pills. Which of the following diseases is she most likely to suffer from?**

a) Breast carcinoma
b) Cervical cancer
c) Esophagal cancer
d) Broncho pneumonia
(e) Coronary heart disease

26. **A mother's sputum is tested positive for acid fast bacilli. She wants advice regarding breast-feeding her baby. Choose the best option for this case.**

(a) The mother should receive anti-TB drugs and sputum should be tested again. At the same time the baby should receive INH prophylaxis, and then breast-feeding can be started
b) The baby should receive anti-TB drug and then-breast feeding can be started
c) Both mother and child should receive anti-TB drugs and then breast-feeding can be started
d) Mother should breast-feed her baby in any case
e) Mother should not breast-feed her baby

27. **A mother was tested positive for hepatitis B virus. She wants advice regarding breast-feeding her baby. Out of following, choose the best option.**

a) The mother should receive antiretroviral drug and then breast-feeding can be started
b) The baby should receive antiretroviral drug and then breast-feeding can be started
c) Both mother and child should receive antiretroviral drugs and then breast-feeding can be started
(d) The baby should receive both active and passive immunization against hepatitis B, and then mother should breast-feed her baby
e) Mother should not breast-feed her baby

Key:	25.e)	26.a)	27.d)

28. **A pregnant woman is suffering from pulmonary tuberculosis. Out of following anti-tuberculosis drugs, which one is contraindicated to her?**

a) Isoniazid
b) Rifampicin
c) Pyrazinamide
d) Ethambutol
(e) Streptomycin

29. **A mother is tested positive for hepatitis C virus. She also has cracks/injury on and around her nipples. She wants advice regarding breast-feeding to her baby. Out of following, choose the best option.**

a) The mother should receive antiretroviral drug and then breast-feeding can be started
b) The baby should receive antiretroviral drugs and then breast-feeding can be started
c) Both mother and child should receive hepatitis C vaccine and then breast feeding can be started
d) Mother should breast-feed her baby even if there are cracks or injury around nipples
(e) Mother should breast-feed her baby after the cracks or injury on and around nipples are healed

30. **A 12-year-old child has some behaviour problem and requires psychotherapy. He/she should be referred to a:**

a) Paediatric ward
b) Borstal (youth custody center)
c) Social support centre
(d) Child guidance clinic
e) Rehabilitation centre

Key:	28.e)	29.e)	30.d)

38. A nulliparous woman wants advice regarding contraceptive method. Which one of the following is NOT the method of first choice?
a) Diaphragm
b) Condom
c) Intrauterine contraceptive device
d) Oral contraceptive pills
e) Rhythm method

39. Puerperal sepsis is the most common complication of:
a) Ante-natal period
b) Intra-natal period
c) Post-natal period
d) a and b
e) b and c

40. A 32-year-old multipara woman is pregnant for 20 weeks. Her BMI is 15. Which is the best option in her case?
a) Advise domiciliary delivery
b) She is overweight, ask her to reduce weight
c) Her nutritional status is poor, so advise institutional delivery
d) Advise ultrasound to find the if there is twin pregnancy
e) Ask the health status of other children to decide further advice

41. A nutritionist plans to conduct a quick survey to find the prevalence of malnutrition in a large population of children of 1 to 5 years age group. Which one of the following options is the most appropriate in this scenario?
a) Height for age
b) Mid upper arm circumference
c) Chest circumference
d) Weight for height
e) Physical examination

Key:	38.c)	39.c)	40.c)	41.b)

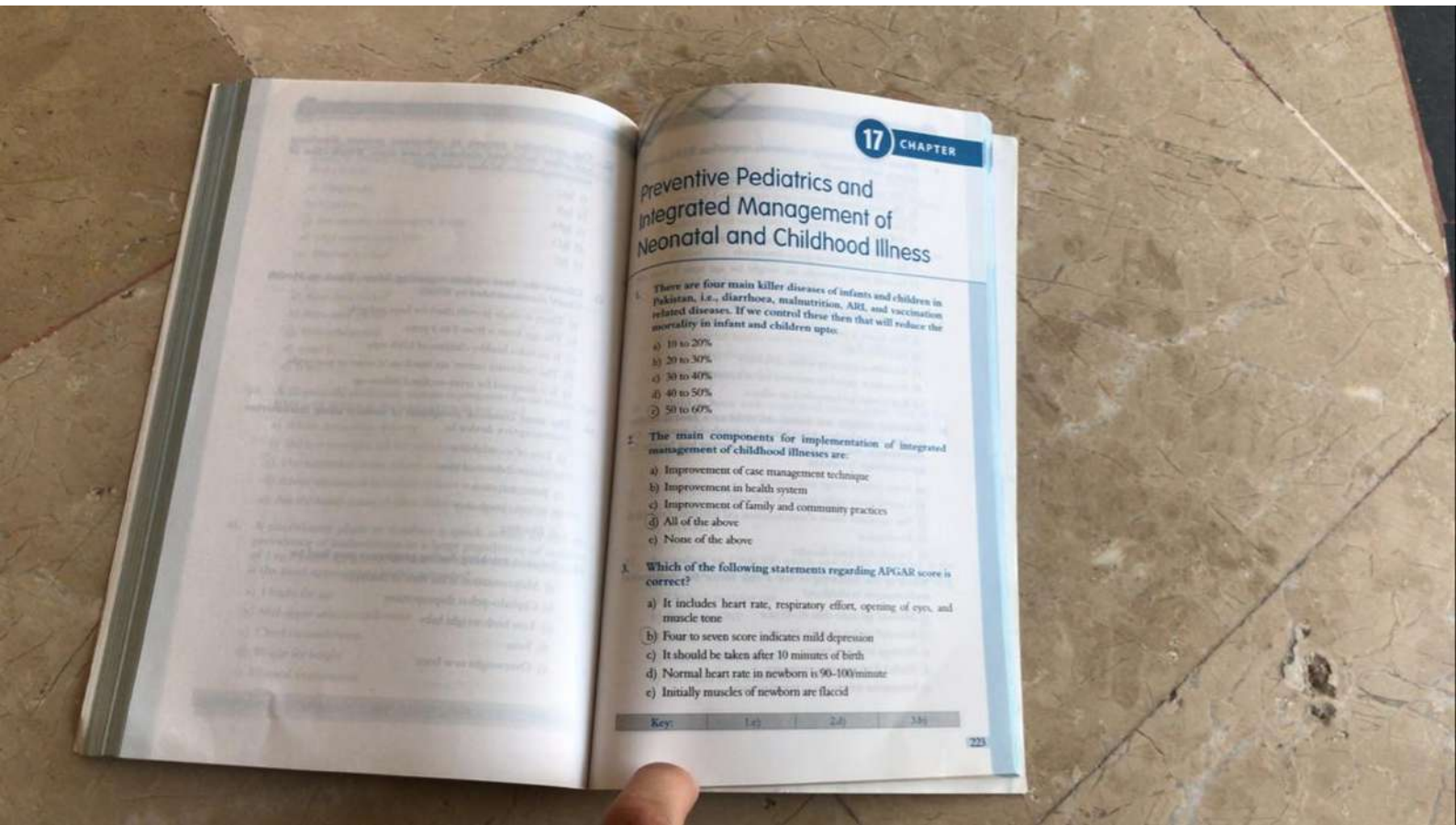
42. The antibodies present in colostrum prevent diarrhoea and other infectious diseases in new born. Which class of immunoglobulin do they belong to?
a) IgG
b) IgA
c) IgM
d) IgD
e) IgE

43. Choose the best option regarding latest 'Road to Health Chart' recommended by WHO.
a) There is single growth chart for boys and girls
b) The age limit is from 0 to 3 years
c) It includes healthy children of USA only
d) The 'reference curves' are based on 'z' score or percentile
e) It is designed for cross-sectional follow-up

44. The most common complaint of women using intrauterine contraceptive device is:
a) Loss of sexual derive
b) Lower abdominal pain
c) Pelvic infection
d) Ectopic pregnancy
e) Bleeding

45. Tobacco smoking during pregnancy may lead to:
a) Malpresentation at the time of delivery
b) Cephalo-pelvic disproportion
c) Low birth weight baby
d) Twin
e) Overweight new born

Key:	42.b)	43.d)	44.e)	45.a)



CHAPTER 17

Preventive Pediatrics and Integrated Management of Neonatal and Childhood Illness

1. **There are four main killer diseases of infants and children in Pakistan, i.e., diarrhoea, malnutrition, ARI, and vaccination related diseases. If we control these then that will reduce the mortality in infant and children upto:**
   a) 10 to 20%
   b) 20 to 30%
   c) 30 to 40%
   d) 40 to 50%
   e) 50 to 60%

2. **The main components for implementation of integrated management of childhood illnesses are:**
   a) Improvement of case management technique
   b) Improvement in health system
   c) Improvement of family and community practices
   d) All of the above
   e) None of the above

3. **Which of the following statements regarding APGAR score is correct?**
   a) It includes heart rate, respiratory effort, opening of eyes, and muscle tone
   b) Four to seven score indicates mild depression
   c) It should be taken after 10 minutes of birth
   d) Normal heart rate in newborn is 90-100/minute
   e) Initially muscles of newborn are flaccid

Key:	1.e)	2.d)	3.b)

4. **Which of the following statements regarding WHO growth chart is NOT correct?**
   a) The upper-most reference curve represents + 3 'z' score
   b) The lower-most reference curve represents-3 'z' score
   c) Growth chart represent the weights of healthy children of all countries
   d) The line drawn representing the weight of a healthy child should be either horizontal or going downwards
   e) Growth chart represents the weight for age upto 3 years old children

5. **The term juvenile delinquency refers to:**
   a) Poor health in juvenile.
   b) Homeless child.
   c) A condition caused by iodine deficiency
   d) A condition caused by excessive use of narcotics
   e) A child who has committed an offence

6. **A mother brought her 4-year-old child to a health facility to find out whether his physical growth is normal. On examination, the child was found to be having low height for age (stunting). It reflects:**
   a) Severe protein energy malnutrition
   b) Current severe under-nutrition or disease
   c) The cumulative effects of undernutrition and infections since birth
   d) Kwashiorkor
   e) Fluoride deficiency disorder

7. **Which of the following is not a risk factor for congenital malformation in children?**
   a) Maternal age more than 40–45 year
   b) Maternal age less than 15-18 year
   c) Marriage in close relatives
   d) Alcohol if taken during pregnancy
   e) Intrauterine infection, e.g. toxoplasmosis

Key:	4.d)	5.e)	6.c)	7.b)

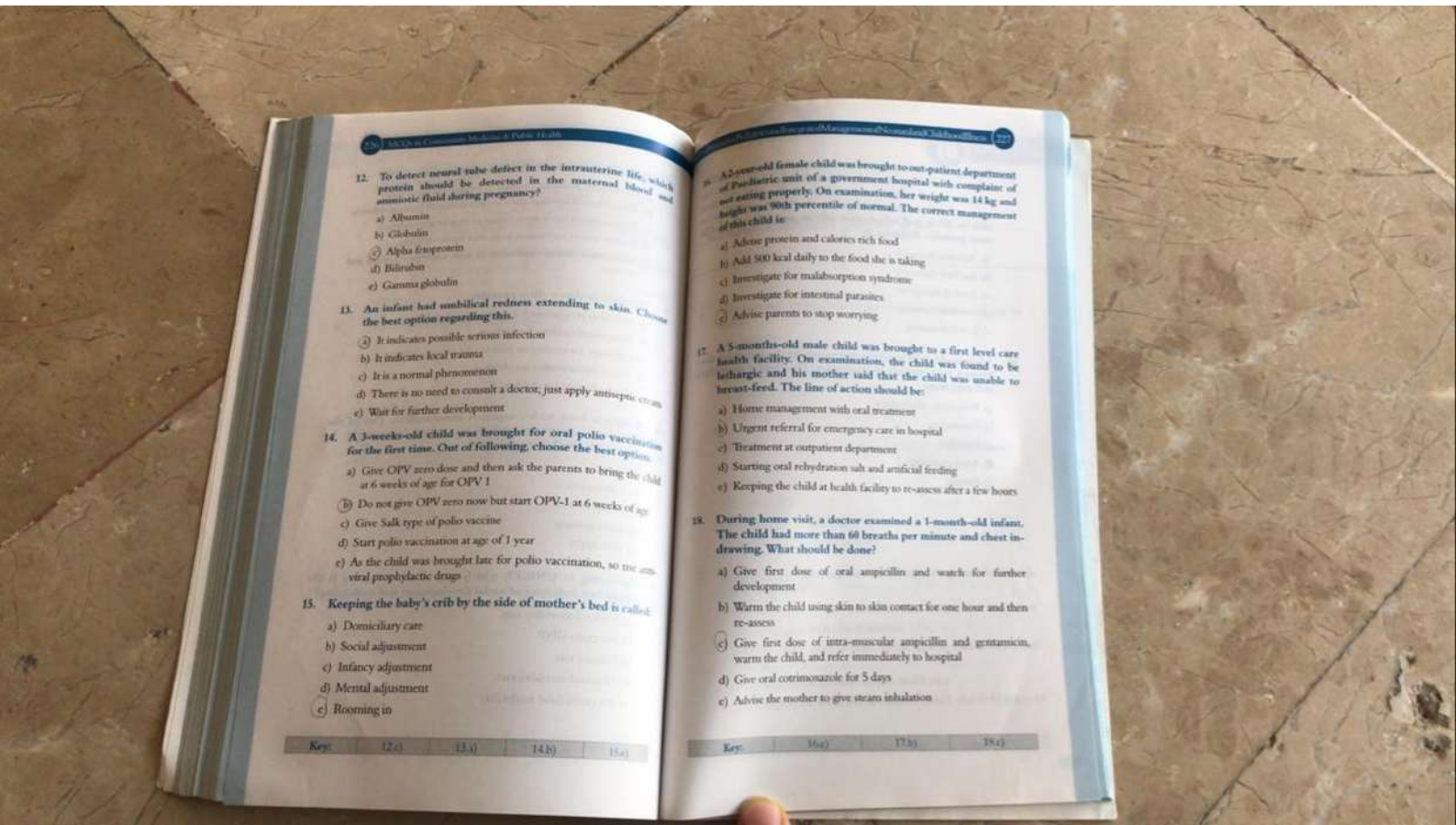
8. **The best way to prevent tetanus neonatorum is:**
   a) Prophylactic antibiotic coverage to mother during delivery
   b) Tetanus toxoid injection given to child within 48 hours of delivery
   c) Tetanus toxoid vaccination course to mother after delivery
   d) Tetanus toxoid vaccination to mother before delivery
   e) Anti-tetanus immunoglobulins to both expecting woman and neonate

9. **The child guidance clinic provides:**
   a) Nutrition programme for malnourished children
   b) Educational facilities for orphans
   c) Guidance for mother on how to take care of children
   d) Career opportunities for children
   e) Psychotherapy for children

10. **A child is born with congenital abnormalities. Out of the following intrauterine infections, which one might be responsible for this condition?**
    a) Measles
    b) Chickenpox
    c) Toxoplasmosis
    d) Leishmaniasis
    e) HIV-AIDS

11. **According to UNICEF, which one of the following is the single best indicator of social development and well-being?**
    a) Under-5 mortality rate
    b) Per capita GNP
    c) Literacy rate
    d) Maternal mortality rate
    e) Per capita food availability

Key:	8.d)	9.e)	10.c)	11.a)



12. **To detect neural tube defect in the intrauterine life, which protein should be detected in the maternal blood and amniotic fluid during pregnancy?**
   a) Albumin
   b) Globulin
   c) Alpha fetoprotein
   d) Bilirubin
   e) Gamma globulin

13. **An infant had umbilical redness extending to skin. Choose the best option regarding this.**
   a) It indicates possible serious infection
   b) It indicates local trauma
   c) It is a normal phenomenon
   d) There is no need to consult a doctor, just apply antiseptic cream
   e) Wait for further development

14. **A 3-weeks-old child was brought for oral polio vaccination for the first time. Out of following, choose the best option.**
   a) Give OPV zero dose and then ask the parents to bring the child at 6 weeks of age for OPV 1
   b) Do not give OPV zero now but start OPV-1 at 6 weeks of age
   c) Give Salk type of polio vaccine
   d) Start polio vaccination at age of 1 year
   e) As the child was brought late for polio vaccination, so use anti-viral prophylactic drugs

15. **Keeping the baby's crib by the side of mother's bed is called:**
   a) Domiciliary care
   b) Social adjustment
   c) Infancy adjustment
   d) Mental adjustment
   e) Rooming in

Key:	12.c)	13.a)	14.b)	15.e)

16. **A 2-year-old female child was brought to out-patient department of Paediatric unit of a government hospital with complaint of not eating properly. On examination, her weight was 14 kg and height was 90th percentile of normal. The correct management of this child is:**
   a) Advise protein and calories rich food
   b) Add 500 kcal daily to the food she is taking
   c) Investigate for malabsorption syndrome
   d) Investigate for intestinal parasites
   e) Advise parents to stop worrying

17. **A 5-months-old male child was brought to a first level care health facility. On examination, the child was found to be lethargic and his mother said that the child was unable to breast-feed. The line of action should be:**
   a) Home management with oral treatment
   b) Urgent referral for emergency care in hospital
   c) Treatment at outpatient department
   d) Starting oral rehydration salt and artificial feeding
   e) Keeping the child at health facility to re-assess after a few hours

18. **During home visit, a doctor examined a 1-month-old infant. The child had more than 60 breaths per minute and chest in-drawing. What should be done?**
   a) Give first dose of oral ampicillin and watch for further development
   b) Warm the child using skin to skin contact for one hour and then re-assess
   c) Give first dose of intra-muscular ampicillin and gentamicin, warm the child, and refer immediately to hospital
   d) Give oral cotrimoxazole for 5 days
   e) Advise the mother to give steam inhalation

Key:	16.a)	17.b)	18.c)

19. During home visit, a doctor examined a 3-year-old child who was suffering from diarrhoea for the last 3 days. On examination, the child was found very lethargic, had sunken eyes, and skin pinch went back very slowly. The child was not able to drink oral rehydration salt or any other fluid. The most probable diagnosis is:
   a) Amoebic dysentery
   b) Bacillary dysentery
   c) Some dehydration
   d) Severe dehydration
   e) Cerebral malaria

20. A 5-year-old child has irritating cough for the last three days. There is loud crowing on inspiration. The child is most likely suffering from:
   a) Pulmonary tuberculosis
   b) Pneumonia
   c) Tonsillitis
   d) Acute pharyngitis
   e) Pertussis

Key:	19.d)	20.e)

18 CHAPTER

School Health Services

1. The routine medical check up of school children should be done:
   a) Annually
   b) Four times/year
   c) On the report of teachers
   d) When required
   e) When there is an epidemic

2. What type of desks are recommended for school children?
   a) Minus type
   b) Plus type
   c) Multiple type
   d) Desks with plastic seats
   e) Desks with declining back rest

3. Which of the following statements regarding a school health team is correct?
   a) It consists of one male doctor, one female doctor and two nurses
   b) It serves upto 5000 school children
   c) Every school, small or large, should have its own school health team
   d) It is responsible for only curative health care
   e) It is responsible for health of children from 1 year to 15 years old

Key:	1.b)	2.a)	3.b)

4. **If a vertical line drawn from the edge of the desk touches the edge of the seat, it is:**
   a) Minus desk
   b) Plus desk
   c) Zero desk
   d) Defective desk
   e) Easy desk

5. **The minimum recommended floor space per child in school is:**
   a) 15 sq.ft
   b) 20 sq.ft
   c) 25 sq.ft
   d) 30 sq.ft
   e) 35 sq.ft

6. **Minus desk is recommended for the school children. It is defined as when the vertical line drawn from the edge of the desk:**
   a) Falls on the seat
   b) Touches the edge of the seat
   c) Falls away from the seat
   d) Falls 2 inches away from the seat
   e) Falls 4 inches away from the seat

7. **In a class room, the average noise level is 80 dBA. From this observation, it is concluded that:**
   a) The noise level is acceptable
   b) The level is higher than acceptable
   c) The level lower than acceptable
   d) The frequency of the noise should also be measured before making any decision
   e) Nothing can be concluded from this data

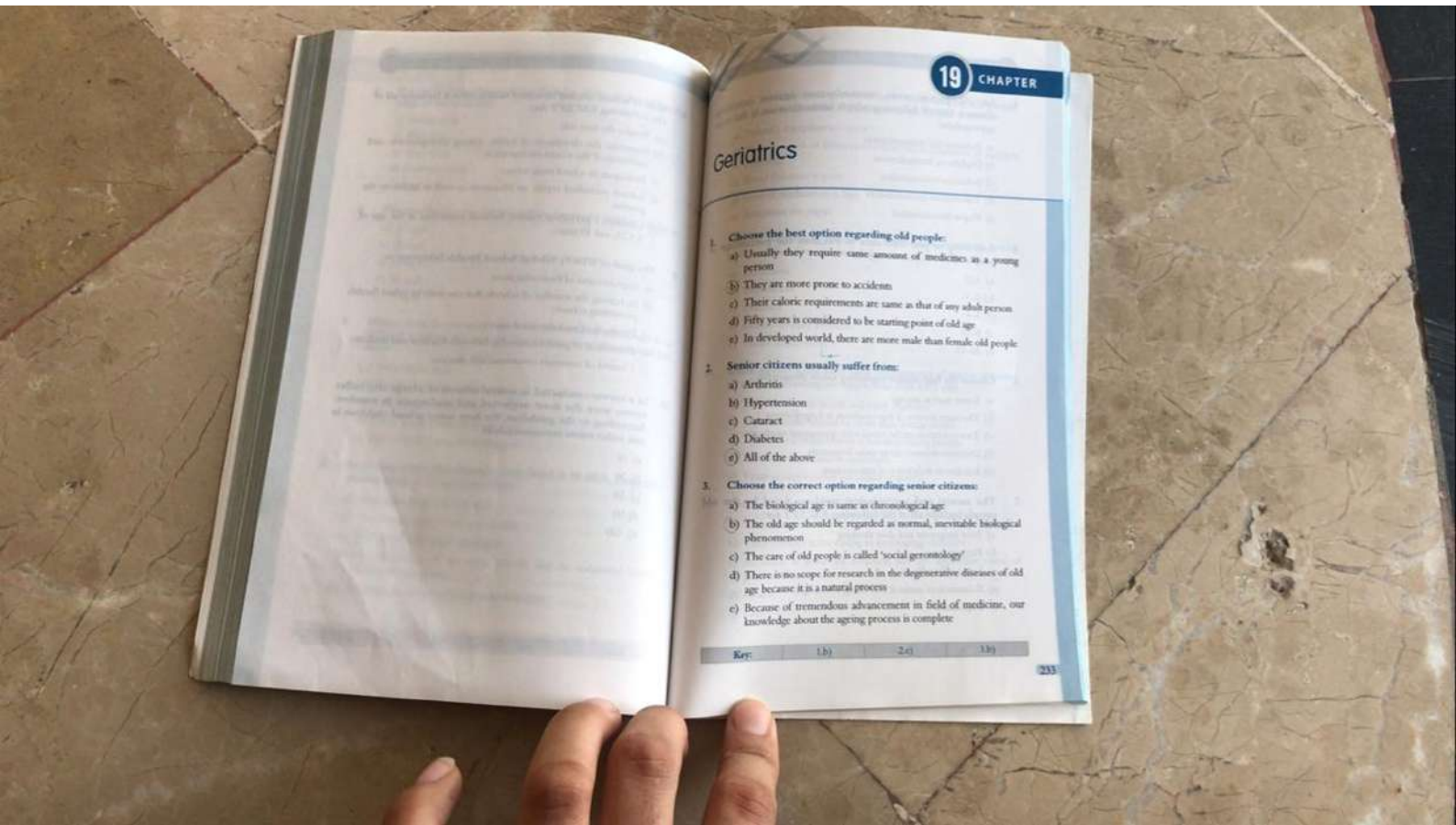
Key:	4.c)	5.a)	6.a)	7.b)

8. **Role of school teacher in school health service includes all of the following, EXCEPT for:**
   a) Render the first aids
   b) Supervise the cleanliness of toilets, seating arrangements, and sanitation of the school environment
   c) Participate in school meal service
   d) Submit periodical report on education as well as health to the parents
   e) Conduct a periodical routine medical inspection at the age of 5,9,13, and 19 years

9. **The goal of WHO's 'Global School Health Initiative' is:**
   a) Improvement of basic education
   b) Increasing the number of schools that can truly be called 'health promoting schools'
   c) Provision of mid-day meal service
   d) Promotion of good relationship between teachers and students
   e) Control of common communicable diseases

10. **In a survey conducted in several schools of a large city, toilet rooms were the most neglected and inadequate in number. According to the guideline, for how many school children is one toilet room recommended?**
    a) 10
    b) 30
    c) 50
    d) 80
    e) 100

Key:	8.e)	9.b)	10.c)



19 CHAPTER

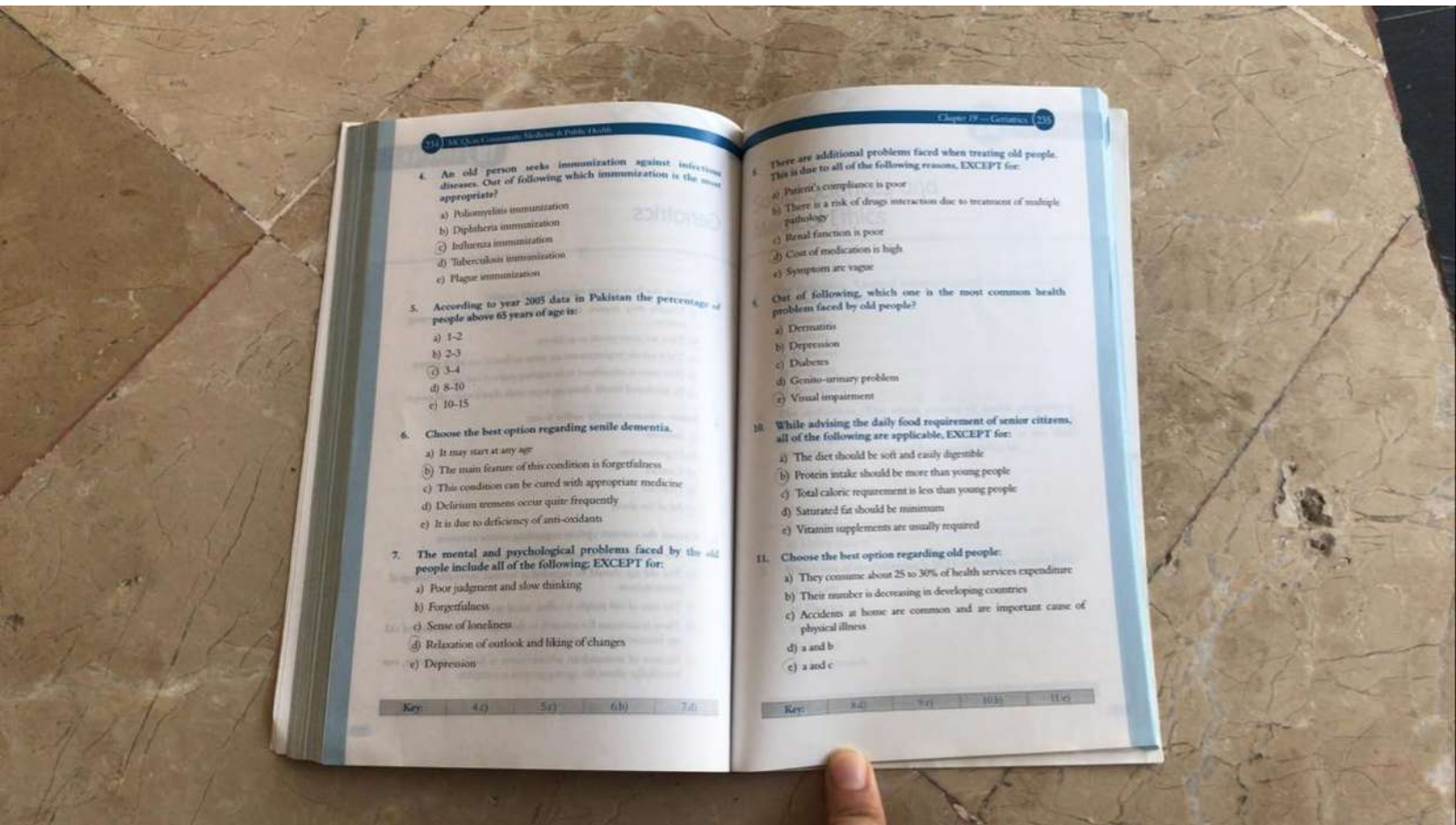
Geriatrics

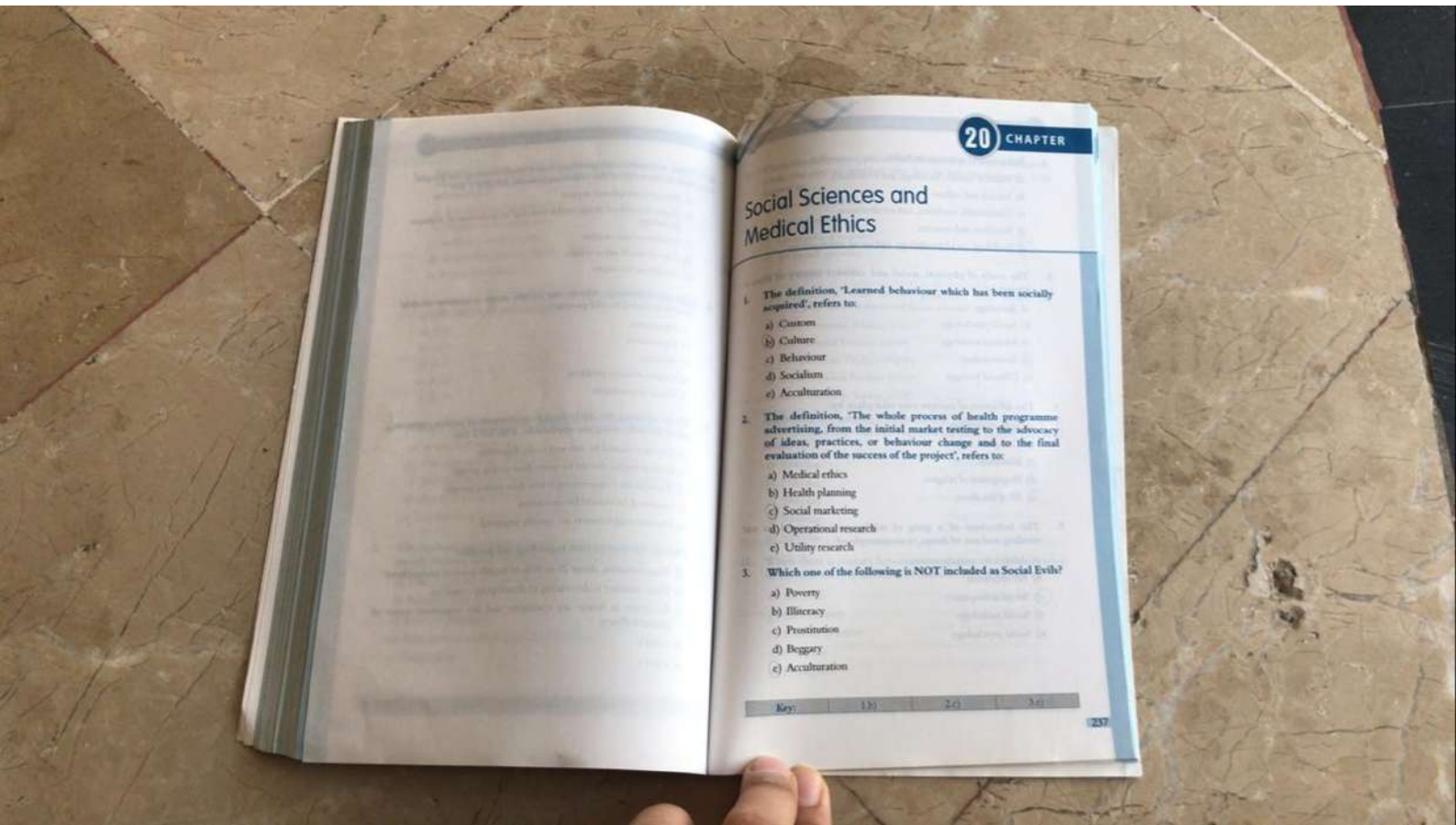
1. **Choose the best option regarding old people:**
   a) Usually they require same amount of medicines as a young person
   b) They are more prone to accidents
   c) Their caloric requirements are same as that of any adult person
   d) Fifty years is considered to be starting point of old age
   e) In developed world, there are more male than female old people

2. **Senior citizens usually suffer from:**
   a) Arthritis
   b) Hypertension
   c) Cataract
   d) Diabetes
   e) All of the above

3. **Choose the correct option regarding senior citizens:**
   a) The biological age is same as chronological age
   b) The old age should be regarded as normal, inevitable biological phenomenon
   c) The care of old people is called 'social gerontology'
   d) There is no scope for research in the degenerative diseases of old age because it is a natural process
   e) Because of tremendous advancement in field of medicine, our knowledge about the ageing process is complete

Key:	1.b)	2.e)	3.b)


234 | MCQs in Community Medicine & Public Health
4. An old person seeks immunization against infectious diseases. Out of following which immunization is the most appropriate?
a) Poliomyelitis immunization
b) Diphtheria immunization
c) Influenza immunization
d) Tuberculosis immunization
e) Plague immunization
5. According to year 2005 data in Pakistan the percentage of people above 65 years of age is:
a) 1-2
b) 2-3
c) 3-4
d) 8-10
e) 10-15
6. Choose the best option regarding senile dementia.
a) It may start at any age
b) The main feature of this condition is forgetfulness
c) This condition can be cured with appropriate medicine
d) Delirium tremens occur quite frequently
e) It is due to deficiency of anti-oxidants
7. The mental and psychological problems faced by the old people include all of the following; EXCEPT for:
a) Poor judgment and slow thinking
b) Forgetfulness
c) Sense of loneliness
d) Relaxation of outlook and liking of changes
e) Depression
Key: 4.c) 5.a) 6.b) 7.d)
Chapter 19 — Geriatrics | 235
8. There are additional problems faced when treating old people. This is due to all of the following reasons, EXCEPT for:
a) Patient's compliance is poor
b) There is a risk of drugs interaction due to treatment of multiple pathology
c) Renal function is poor
d) Cost of medication is high
e) Symptom are vague
9. Out of following, which one is the most common health problem faced by old people?
a) Dermatitis
b) Depression
c) Diabetes
d) Genito-urinary problem
e) Visual impairment
10. While advising the daily food requirement of senior citizens, all of the following are applicable, EXCEPT for:
a) The diet should be soft and easily digestible
b) Protein intake should be more than young people
c) Total caloric requirement is less than young people
d) Saturated fat should be minimum
e) Vitamin supplements are usually required
11. Choose the best option regarding old people:
a) They consume about 25 to 30% of health services expenditure
b) Their number is decreasing in developing countries
c) Accidents at home are common and are important cause of physical illness
d) a and b
e) a and c
Key: 8.d) 9.e) 10.b) 11.e)



20 CHAPTER

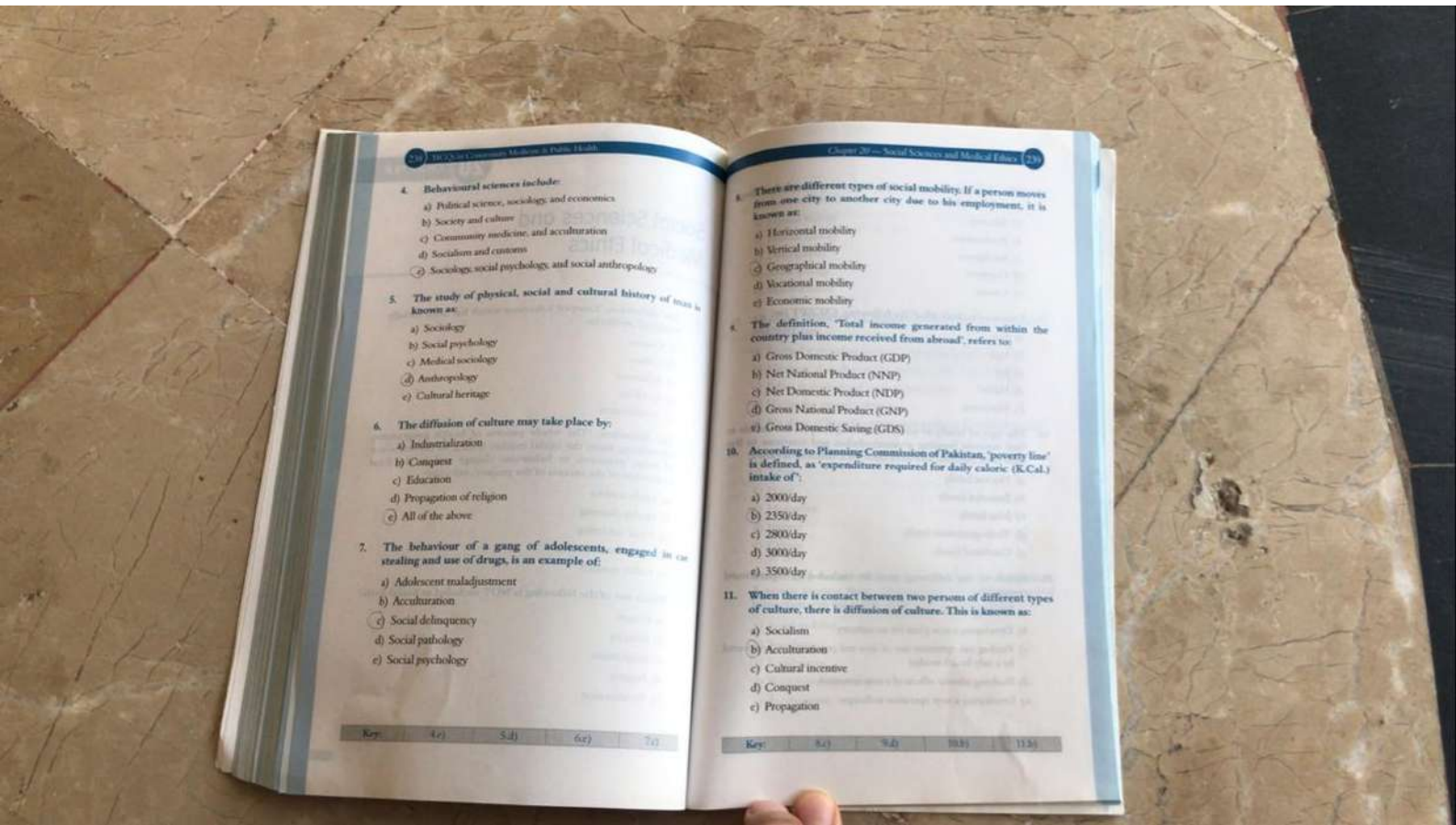
Social Sciences and Medical Ethics

1. **The definition, 'Learned behaviour which has been socially acquired', refers to:**
   a) Custom
   b) Culture
   c) Behaviour
   d) Socialism
   e) Acculturation

2. **The definition, 'The whole process of health programme advertising, from the initial market testing to the advocacy of ideas, practices, or behaviour change and to the final evaluation of the success of the project', refers to:**
   a) Medical ethics
   b) Health planning
   c) Social marketing
   d) Operational research
   e) Utility research

3. **Which one of the following is NOT included as Social Evils?**
   a) Poverty
   b) Illiteracy
   c) Prostitution
   d) Beggary
   e) Acculturation

Key: 1.b) 2.c) 3.e)



238 | MCQs in Community Medicine & Public Health

4. **Behavioural sciences include:**
   a) Political science, sociology, and economics
   b) Society and culture
   c) Community medicine, and acculturation
   d) Socialism and customs
   e) Sociology, social psychology, and social anthropology

5. **The study of physical, social and cultural history of man is known as:**
   a) Sociology
   b) Social psychology
   c) Medical sociology
   d) Anthropology
   e) Cultural heritage

6. **The diffusion of culture may take place by:**
   a) Industrialization
   b) Conquest
   c) Education
   d) Propagation of religion
   e) All of the above

7. **The behaviour of a gang of adolescents, engaged in car stealing and use of drugs, is an example of:**
   a) Adolescent maladjustment
   b) Acculturation
   c) Social delinquency
   d) Social pathology
   e) Social psychology

Key:	4.e)	5.d)	6.e)	7.c)

Chapter 20 — Social Sciences and Medical Ethics | 239

8. **There are different types of social mobility. If a person moves from one city to another city due to his employment, it is known as:**
   a) Horizontal mobility
   b) Vertical mobility
   c) Geographical mobility
   d) Vocational mobility
   e) Economic mobility

9. **The definition, 'Total income generated from within the country plus income received from abroad', refers to:**
   a) Gross Domestic Product (GDP)
   b) Net National Product (NNP)
   c) Net Domestic Product (NDP)
   d) Gross National Product (GNP)
   e) Gross Domestic Saving (GDS)

10. **According to Planning Commission of Pakistan, 'poverty line' is defined, as 'expenditure required for daily caloric (K.Cal.) intake of':**
   a) 2000/day
   b) 2350/day
   c) 2800/day
   d) 3000/day
   e) 3500/day

11. **When there is contact between two persons of different types of culture, there is diffusion of culture. This is known as:**
   a) Socialism
   b) Acculturation
   c) Cultural incentive
   d) Conquest
   e) Propagation

Key:	8.c)	9.d)	10.b)	11.b)

12. **The type of learning that improves knowledge about something is known as:**
    a) Affective
    b) Psychomotor
    c) Intelligence
    d) Cognitive
    e) Somatic

13. **Emotions include all of the following, EXCEPT for:**
    a) Fear
    b) Lust
    c) Joy
    d) Hatred
    e) Motivation

14. **The type of family in which the young couples are unable to find separate housing accommodation and continue to live with their parents, and have their own children is called:**
    a) Nuclear family
    b) Extended family
    c) Joint family
    d) Three-generation family
    e) Combined family

15. **Which of the following may be included as 'operational research'?**
    a) Working on atomic structure
    b) Developing a new plant for an industry
    c) Finding out optimum size of area and population to be covered by a lady health worker
    d) Studying adverse effects of a new invention
    e) Developing a new operation technique

Key: 12.(d) | 13.(e) | 14.(d) | 15.(c)

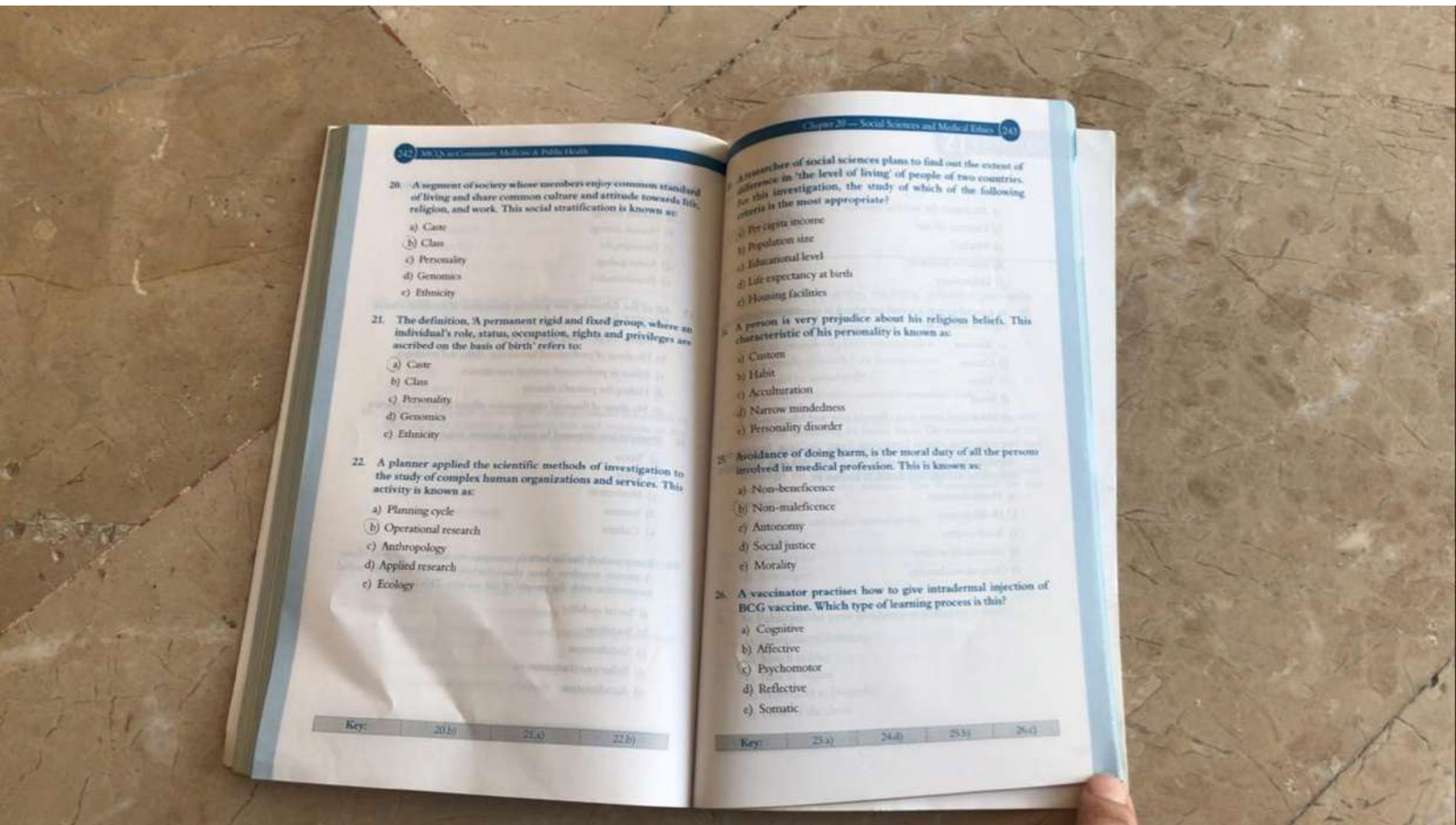
16. **The definition, 'study of physical, social, and cultural history of man', refers to:**
    a) Human biology
    b) Human ecology
    c) Demography
    d) Anthropology
    e) Bioinformatics

17. **All of the following are guiding principles of medical ethics; EXCEPT for:**
    a) Equity for providing medical cover to all the patients
    b) No abuse of professional knowledge, skills, and privileges
    c) Ethics in professional medical examination
    d) Hiding the patient's identity
    e) No abuse of financial opportunities offered by medical practice

18. **'Prohibition imposed by social custom' refers to:**
    a) Taboo
    b) Habit
    c) Motivation
    d) Instinct
    e) Culture

19. **Every society has its beliefs, customs, traditions, and prejudices. A person acquires these characteristics in his everyday social interaction with the people of the society. This is called:**
    a) Social mobility
    b) Socialism
    c) Socialization
    d) Behavioural adjustment
    e) Acculturation

Key: 16.(d) | 17.(d) | 18.(a) | 19.(c)


242 MCQs in Community Medicine & Public Health
20. A segment of society whose members enjoy common standard of living and share common culture and attitude towards life, religion, and work. This social stratification is known as:
a) Caste
b) Class
c) Personality
d) Genomics
e) Ethnicity
21. The definition, 'A permanent rigid and fixed group, where an individual's role, status, occupation, rights and privileges are ascribed on the basis of birth' refers to:
a) Caste
b) Class
c) Personality
d) Genomics
e) Ethnicity
22. A planner applied the scientific methods of investigation to the study of complex human organizations and services. This activity is known as:
a) Planning cycle
b) Operational research
c) Anthropology
d) Applied research
e) Ecology
Key: 20.b) 21.a) 22.b)
Chapter 20 — Social Sciences and Medical Ethics 243
23. A researcher of social sciences plans to find out the extent of difference in 'the level of living' of people of two countries. For this investigation, the study of which of the following criteria is the most appropriate?
a) Per capita income
b) Population size
c) Educational level
d) Life expectancy at birth
e) Housing facilities
24. A person is very prejudice about his religious beliefs. This characteristic of his personality is known as:
a) Custom
b) Habit
c) Acculturation
d) Narrow mindedness
e) Personality disorder
25. Avoidance of doing harm, is the moral duty of all the persons involved in medical profession. This is known as:
a) Non-beneficence
b) Non-maleficence
c) Autonomy
d) Social justice
e) Morality
26. A vaccinator practises how to give intradermal injection of BCG vaccine. Which type of learning process is this?
a) Cognitive
b) Affective
c) Psychomotor
d) Reflective
e) Somatic
Key: 23.a) 24.d) 25.b) 26.c)

27. A 14-year-old boy was caught red-handed while stealing cell phone from a woman's purse. This act should be treated as a case of:
a) Retaliation due to social injustice
b) Criminal offense
c) Mischief
d) Imbecile behaviour
e) Delinquency

28. In a social group, a social act which is considered natural and right, is known as:
a) Tradition
b) Custom
c) Taboo
d) Ritual
e) Habit

29. The 'security' that society provides through appropriate organization against certain risks like sickness, invalidity, maternity, old age and death, is known as:
a) Health insurance
b) Health security
c) Social security
d) Community security
e) Occupational benefits

Key:	27.e)	28.b)	29.c)

21 CHAPTER

Snakebite

1. Choose the best option regarding polyvalent anti-snake venom serum.
a) It is to be given subcutaneously
b) It is an example of passive immunization
c) It is usually obtained from human donors
d) It should be stored at-20° C
e) It contains antibodies against one poisonous snake

2. A 10-year-old boy was brought to a rural health centre, with history of snakebite 12 hours back. On examination of the wound, multiple small punctured lesions were observed and there was minimum swelling or discolouration at the site. Although no sign of systemic envenomation was observed, the patient was very anxious. The management for this emergency include:
a) Polyvalent anti-snake venom serum
b) Painkiller
c) Reassurance
d) Tourniquet
e) Anti-rabies vaccine

3. In Pakistan, the peak incidence of snakebite is from:
a) December to February
b) March to May
c) June to August
d) November to December
e) None of the above

Key:	1.b)	2.c)	3.c)

4. **In out door life, 'at risk' activities associated with snakebite include the following, EXCEPT for:**
   a) Sleeping on ground
   b) Climbing on rocks covered with low vegetation
   c) Probing cervices
   d) Dislodging logs and stones
   e) Wearing rubber boots instead of leather boots

5. **To identify poisonous snakes, one should look for:**
   a) 'PODS' signs at site of bite
   b) Colour of snake
   c) Size of snake
   d) Pattern of markings on back of snake
   e) All of the above

6. **All of the following are sequel of snakebite, EXCEPT for:**
   a) Psychogenic effect
   b) Neurotoxic effects
   c) Haemolytic toxic effects
   d) Mental decline
   e) No effect

7. **Choose the correct option regarding the dosage of polyvalent anti-snake venom serum.**
   a) The dose may be repeated if required
   b) It is better to give a single large dose at one time than to give series of injections
   c) The amount depends upon the severity of signs and symptoms
   d) The usual route of administration is slow intravenous infusion in diluted form
   e) All of the above are correct

Key:	4.c)	5.a)	6.d)	7.c)

8. **Choose the best option regarding poisons of snakes:**
   a) The local effects of haemotoxin are delayed
   b) Cobra's toxin is mostly haemotoxin
   c) Neurotoxin produces less local reaction than haemotoxin
   d) Viper's poison is mostly neurotoxin
   e) Respiratory distress is a common feature in haemotoxin

9. **A snakebite victim was brought to a health facility after 6 hours of bite. There was oozing of blood along with swelling at the site of bite. Echymosis and serum filled blebs were also seen. The most likely snake involved is a/an:**
   a) Viper
   b) Cobra
   c) Krait
   d) Sea snake
   e) Anaconda

10. **A person is brought to a rural health centre within five minutes of snakebite. There is no swelling or oozing of blood at the site of bite. Select the best option for this situation.**
    a) Start the anti-snake venom serum treatment without any delay
    b) As there are no features of poisoning, so person should be discharged after reassurance
    c) Give active immunization against snake venom in three doses, with interval of one month
    d) Signs and symptoms of poisoning may appear later on, so watch the patient and arrange for polyvalent anti snake venom serum
    e) Discharge the person and ask him to report if any signs and symptoms appear later on

Key:	8.c)	9.a)	10.d)

11. **In case of poisonous snakebite, polyvalent anti-snake venom serum is used instead of monovalent anti-snake venom serum. This is because:**

a) Usually it is not possible to find out whether the person was bitten by a poisonous snake or non-poisonous snake

b) There may be confusion about the type of poisonous snake that bit the person

c) Polyvalent anti-snake venom serum is more potent than monovalent anti-snake venom serum to treat the patient

d) Polyvalent anti-snake venom serum is easier to prepare than monovalent anti-snake venom serum

e) Poly valent anti-snake venom serum is less likely to cause allergic reaction as compared to monovalent anti-snake venom serum

12. **A farmer while removing weeds from his field; was bitten by a snake. Within 2 hours of the bite he had following symptoms: Ptosis, ophthalmplegia, strabismus, diplopia, slurred speech, dysphagia, hyper salivation, vomiting, giddiness, drowsiness, and difficulty in breathing. The most likely snake responsible for these types of clinical features is a:**

a) Cobra

b) Saw-scaled viper

c) Pit viper

d) Russell viper

e) Rattle snake

13. **A villager was bitten on the ankle by an unidentified snake at night time. According to the latest recommendation, out of following which first aid measures should NOT be taken?**

a) Reassure the patient

b) Look for airway obstruction

c) Apply tourniquet

d) Immobilize the limb

e) Take the patient to hospital where anti-snake venom serum is available

Key:	11.b)	12.a)	13.c)

14. **A farmer, while irrigating his paddy field, was bitten by a snake. He was brought to tehsil headquarter hospital the next morning. The doctor found that the patient was drowsy and had difficulty in breathing. What was the likely snake?**

a) Saw-scaled viper

b) Russell's viper

c) Pit viper

d) Cobra

e) Spitting cobra

15. **A school boy, while searching for his tennis ball in tall grass, was suddenly bitten by a snake. Next day the parents brought the child to a district headquarter hospital. On examination, it was found that blood was oozing from two puncture marks. There was swelling and discolouration of skin around the wound. The boy also had bleeding from gums and haematuia. Which snake had bitten the child?**

a) Cobra

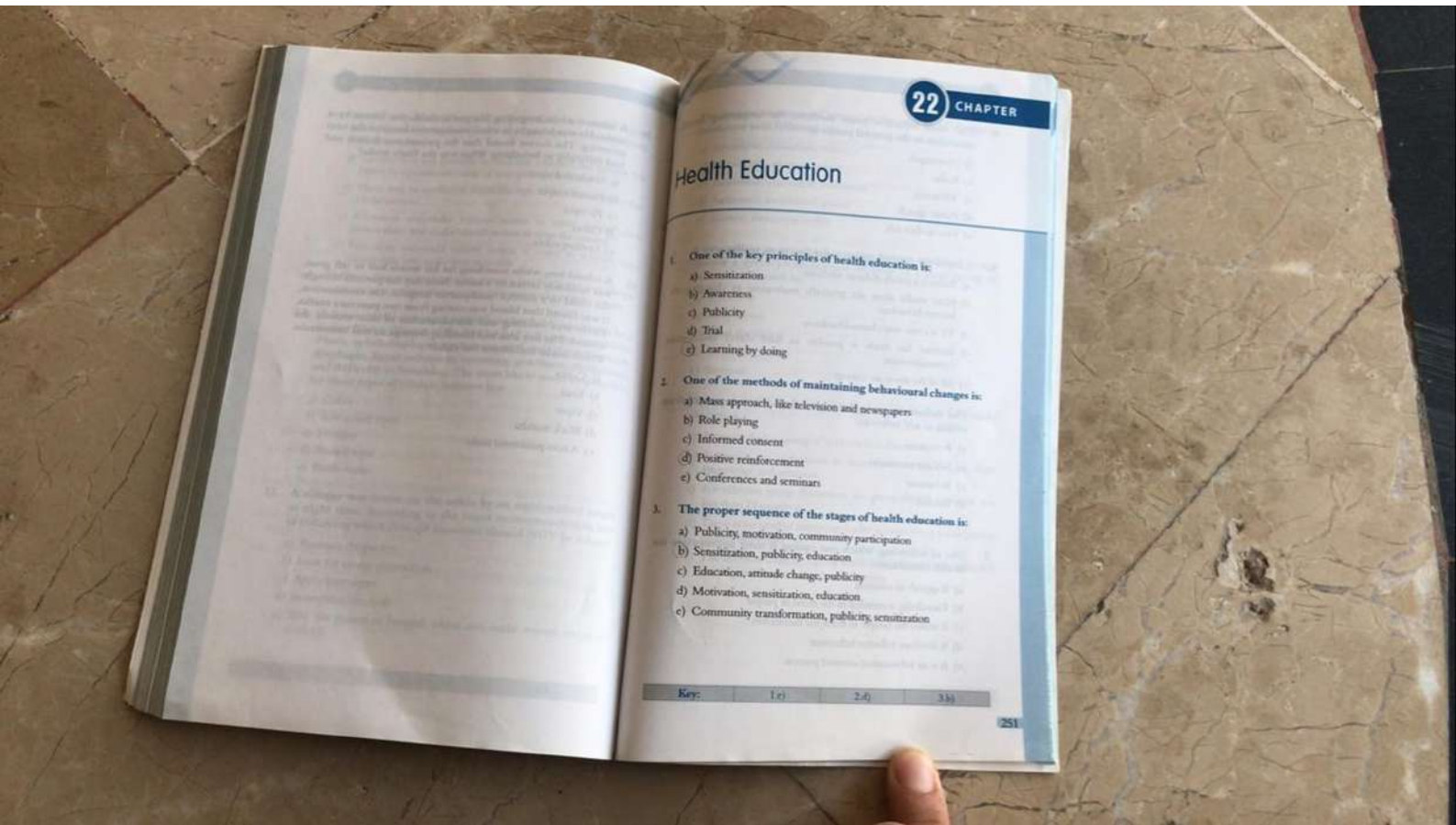
b) Krait

c) Viper

d) Black mamba

e) A non-poisonous snake

Key:	14.d)	15.c)



22 CHAPTER

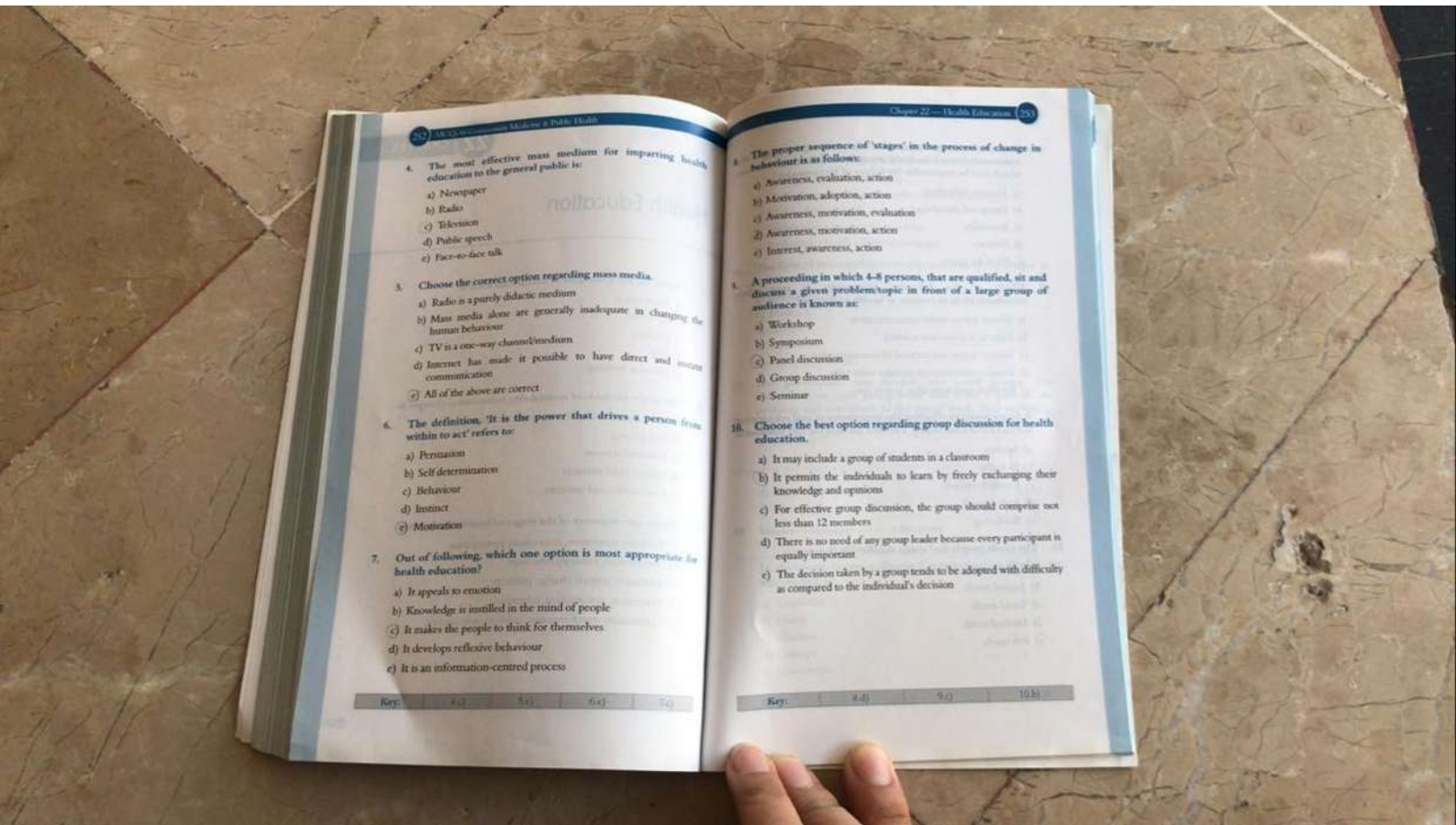
Health Education

1. **One of the key principles of health education is:**
   a) Sensitization
   b) Awareness
   c) Publicity
   d) Trial
   e) Learning by doing

2. **One of the methods of maintaining behavioural changes is:**
   a) Mass approach, like television and newspapers
   b) Role playing
   c) Informed consent
   d) Positive reinforcement
   e) Conferences and seminars

3. **The proper sequence of the stages of health education is:**
   a) Publicity, motivation, community participation
   b) Sensitization, publicity, education
   c) Education, attitude change, publicity
   d) Motivation, sensitization, education
   e) Community transformation, publicity, sensitization

Key:	1.e)	2.d)	3.b)



4. The most effective mass medium for imparting health education to the general public is:
   a) Newspaper
   b) Radio
   c) Television
   d) Public speech
   e) Face-to-face talk

5. Choose the correct option regarding mass media.
   a) Radio is a purely didactic medium
   b) Mass media alone are generally inadequate in changing the human behaviour
   c) TV is a one-way channel/medium
   d) Internet has made it possible to have direct and instant communication
   e) All of the above are correct

6. The definition, 'It is the power that drives a person from within to act' refers to:
   a) Persuasion
   b) Self determination
   c) Behaviour
   d) Instinct
   e) Motivation

7. Out of following, which one option is most appropriate for health education?
   a) It appeals to emotion
   b) Knowledge is instilled in the mind of people
   c) It makes the people to think for themselves
   d) It develops reflexive behaviour
   e) It is an information-centred process

Key:	4.c)	5.e)	6.e)	7.c)

8. The proper sequence of 'stages' in the process of change in behaviour is as follows:
   a) Awareness, evaluation, action
   b) Motivation, adoption, action
   c) Awareness, motivation, evaluation
   d) Awareness, motivation, action
   e) Interest, awareness, action

9. A proceeding in which 4–8 persons, that are qualified, sit and discuss a given problem/topic in front of a large group of audience is known as:
   a) Workshop
   b) Symposium
   c) Panel discussion
   d) Group discussion
   e) Seminar

10. Choose the best option regarding group discussion for health education.
   a) It may include a group of students in a classroom
   b) It permits the individuals to learn by freely exchanging their knowledge and opinions
   c) For effective group discussion, the group should comprise not less than 12 members
   d) There is no need of any group leader because every participant is equally important
   e) The decision taken by a group tends to be adopted with difficulty as compared to the individual's decision

Key:	8.d)	9.c)	10.b)

11. **A doctor wants to change the behaviour of the people of a community towards healthful living. Out of following limitations, which may be responsible for failure of his campaign?**
   a) Hearing difficulties
   b) Emotional disturbance
   c) Invisibility
   d) Illiteracy
   e) All of the above

12. **Which of the following statements is true about communication in context of health education?**
   a) Silence is non-verbal communication
   b) Didactic is a two-way method
   c) Socratic is one-way method of communication
   d) Visual communication includes radio talks
   e) Informal communication is very rare

13. **A doctor wants to tell about the importance of oral rehydration salt in a rural community. The best method for this purpose is:**
   a) Lecture
   b) Role play
   c) Group discussion
   d) Radio speech
   e) Work-shop

14. **The needs people feel about themselves, denotes to:**
   a) Legal needs
   b) Logical needs
   c) Social needs
   d) Medical needs
   e) Felt needs

Key:	11.e)	12.a)	13.c)	14.e)

15. **Establishing a "rapport" is an important step for a successful health education campaign. It means:**
   a) Writing comprehensive reports
   b) Getting sympathetic and friendly relationship with people
   c) Finding the real needs of the people
   d) Establishing a proper plan of action
   e) Evaluating a health education campaign

16. **"The flow of information from the audience to the sender" is known as:**
   a) Reinforcement
   b) Feedback
   c) Interest
   d) Motivation
   e) Learning by doing

17. **The participants are divided into small groups. The individuals in each group work and solve a part of the problem and contribute to the group work. This method of group approach of health communication is known as:**
   a) Role play
   b) Seminar
   c) Symposium
   d) Panel discussion
   e) Workshop

18. **Sender →Message → —— → Receiver**
   Feedback
   In the above Shannon Weaver Communication Model, the missing link is:
   a) Credibility
   b) Clarity
   c) Channel
   d) Concept
   e) Conciseness

Key:	15.b)	16.b)	17.e)	18.c)

19. **In a health education programme, self awareness regarding adverse effects of smoking is classified as:**
a) Goal
b) Objective
c) Target
d) Evaluation
e) Programme

20. **'Providing all health services needed by the people at their doorsteps on the assumption that people would use them to improve their own health'. The above statement is classified as which of the following approaches to health education?**
a) Regulatory approach
b) Service approach
c) Health education approach
d) Primary health care approach
e) Family health approach

21. **In context of health education, 'AIETA' stands for:**
a) A new drug developed for treating psychiatric patients
b) A dietary regimen recommended for obese persons
c) Awareness campaign pertaining to adverse effects of tobacco smoking
d) A new method of communication
e) A model describing behaviour change process

22. **A community health worker plans to teach the mothers of rural population about oral rehydration salt. The best method that can be adopted in this situation is:**
a) Seminar
b) Role play
c) Demonstration
d) Walk
e) Interview

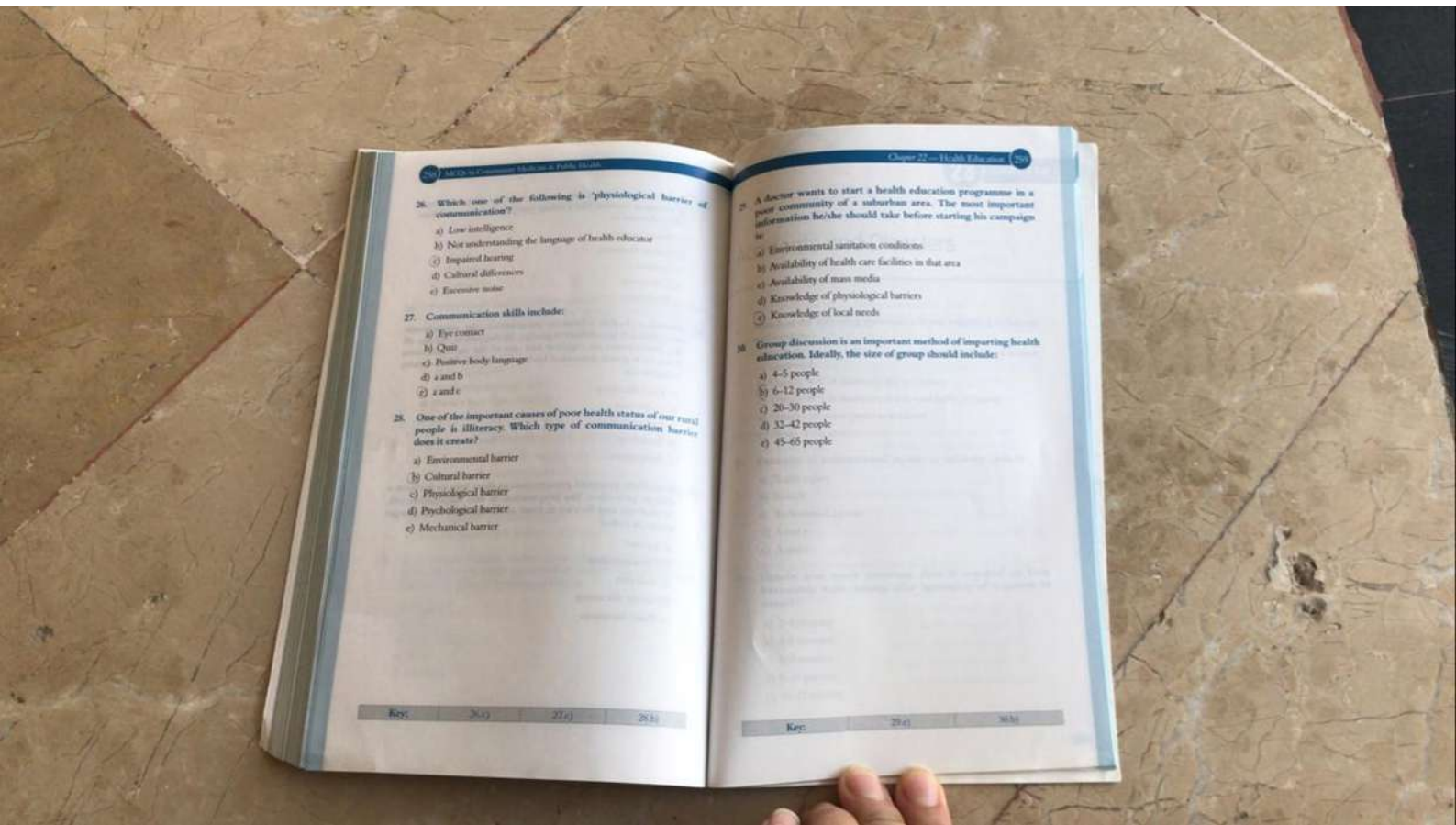
Key:	19.a)	20.b)	21.e)	22.c)

23. **A group of about 15 married women are speaking on a topic of common interest like feeding practices of their children. This is known as:**
a) Panel discussion
b) Group discussion
c) Seminar
d) Conference
e) Workshop

24. **During a health education programme, the participants were divided into different groups. At the end of the day all the participants sat together and one of the representatives from each group presented his/her conclusion. This activity is known as:**
a) Panel discussion
b) Conference
c) Demonstration
d) Workshop
e) Symposium

25. **A carefully prepared presentation to show how to perform a skill or procedure like preparation of oral rehydration salt, carried out step by step in front of an audience or the target group, is called:**
a) Lecture
b) Demonstration
c) Role play
d) Group discussion
e) Panel discussion

Key:	23.b)	24.d)	25.b)



26. **Which one of the following is 'physiological barrier of communication'?**
a) Low intelligence
b) Not understanding the language of health educator
c) Impaired hearing
d) Cultural differences
e) Excessive noise

27. **Communication skills include:**
a) Eye contact
b) Quiz
c) Positive body language
d) a and b
e) a and c

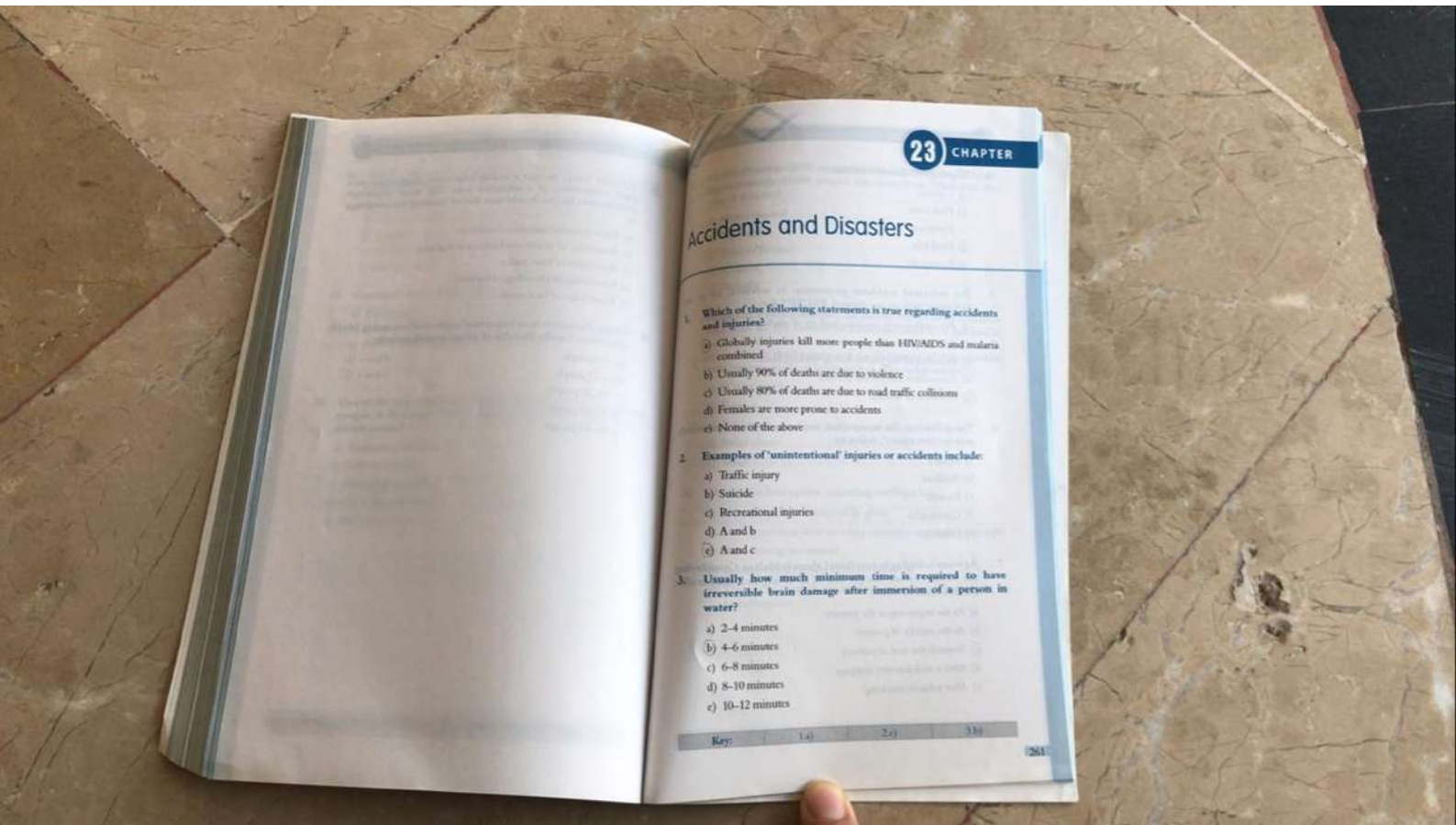
28. **One of the important causes of poor health status of our rural people is illiteracy. Which type of communication barrier does it create?**
a) Environmental barrier
b) Cultural barrier
c) Physiological barrier
d) Psychological barrier
e) Mechanical barrier

Key: 26.(c) 27.(e) 28.(b)

29. **A doctor wants to start a health education programme in a poor community of a suburban area. The most important information he/she should take before starting his campaign is:**
a) Environmental sanitation conditions
b) Availability of health care facilities in that area
c) Availability of mass media
d) Knowledge of physiological barriers
e) Knowledge of local needs

30. **Group discussion is an important method of imparting health education. Ideally, the size of group should include:**
a) 4–5 people
b) 6–12 people
c) 20–30 people
d) 32–42 people
e) 45–65 people

Key: 29.(e) 30.(b)



23 CHAPTER

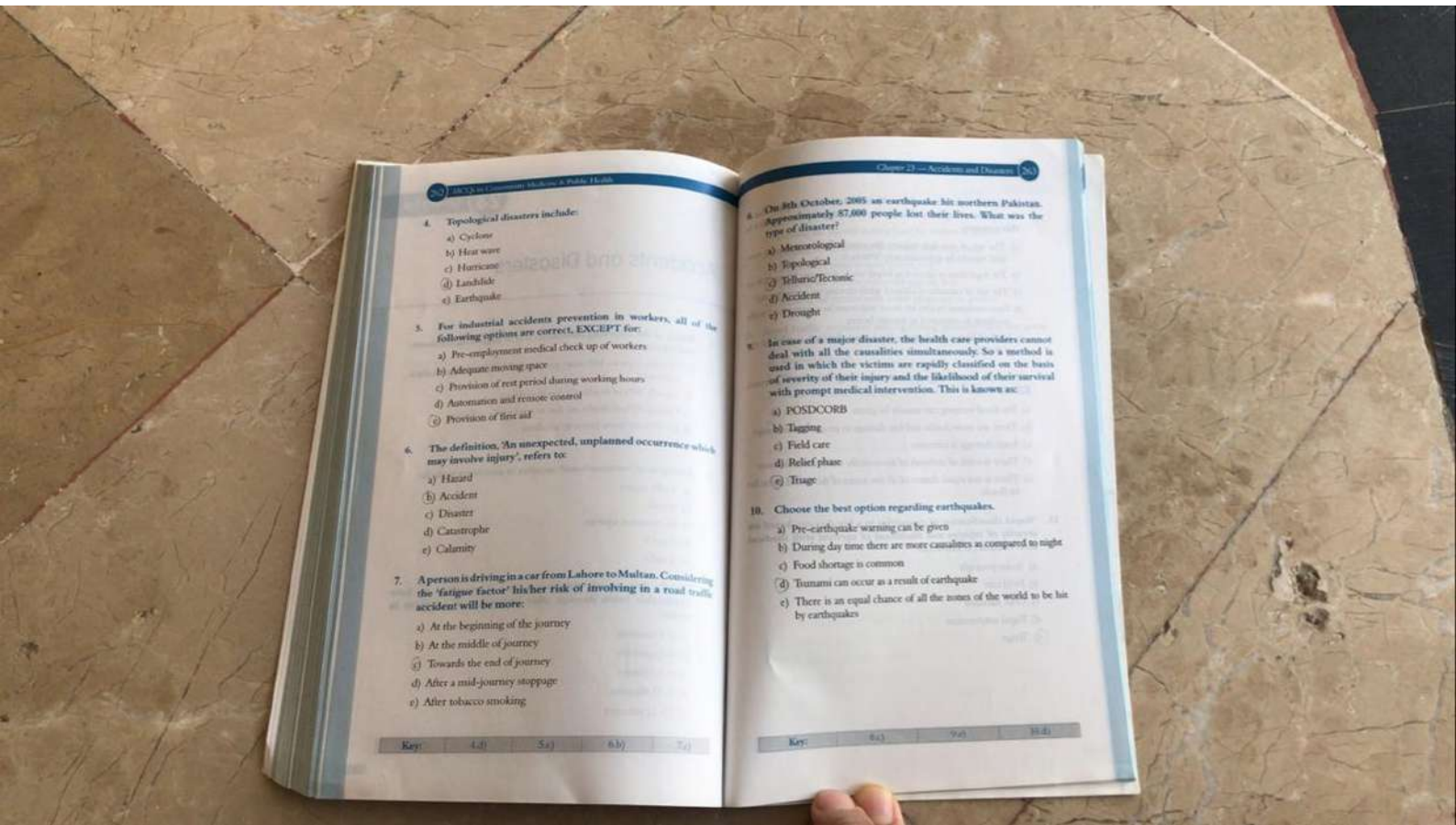
Accidents and Disasters

1. **Which of the following statements is true regarding accidents and injuries?**
   a) Globally injuries kill more people than HIV/AIDS and malaria combined
   b) Usually 90% of deaths are due to violence
   c) Usually 80% of deaths are due to road traffic collisions
   d) Females are more prone to accidents
   e) None of the above

2. **Examples of 'unintentional' injuries or accidents include:**
   a) Traffic injury
   b) Suicide
   c) Recreational injuries
   d) A and b
   e) A and c

3. **Usually how much minimum time is required to have irreversible brain damage after immersion of a person in water?**
   a) 2–4 minutes
   b) 4–6 minutes
   c) 6–8 minutes
   d) 8–10 minutes
   e) 10–12 minutes

Key: 1.a) 2.e) 3.b)



4. **Topological disasters include:**
   a) Cyclone
   b) Heat wave
   c) Hurricane
   d) Landslide
   e) Earthquake

5. **For industrial accidents prevention in workers, all of the following options are correct, EXCEPT for:**
   a) Pre-employment medical check up of workers
   b) Adequate moving space
   c) Provision of rest period during working hours
   d) Automation and remote control
   e) Provision of first aid

6. **The definition, 'An unexpected, unplanned occurrence which may involve injury', refers to:**
   a) Hazard
   b) Accident
   c) Disaster
   d) Catastrophe
   e) Calamity

7. **A person is driving in a car from Lahore to Multan. Considering the 'fatigue factor' his/her risk of involving in a road traffic accident will be more:**
   a) At the beginning of the journey
   b) At the middle of journey
   c) Towards the end of journey
   d) After a mid-journey stoppage
   e) After tobacco smoking

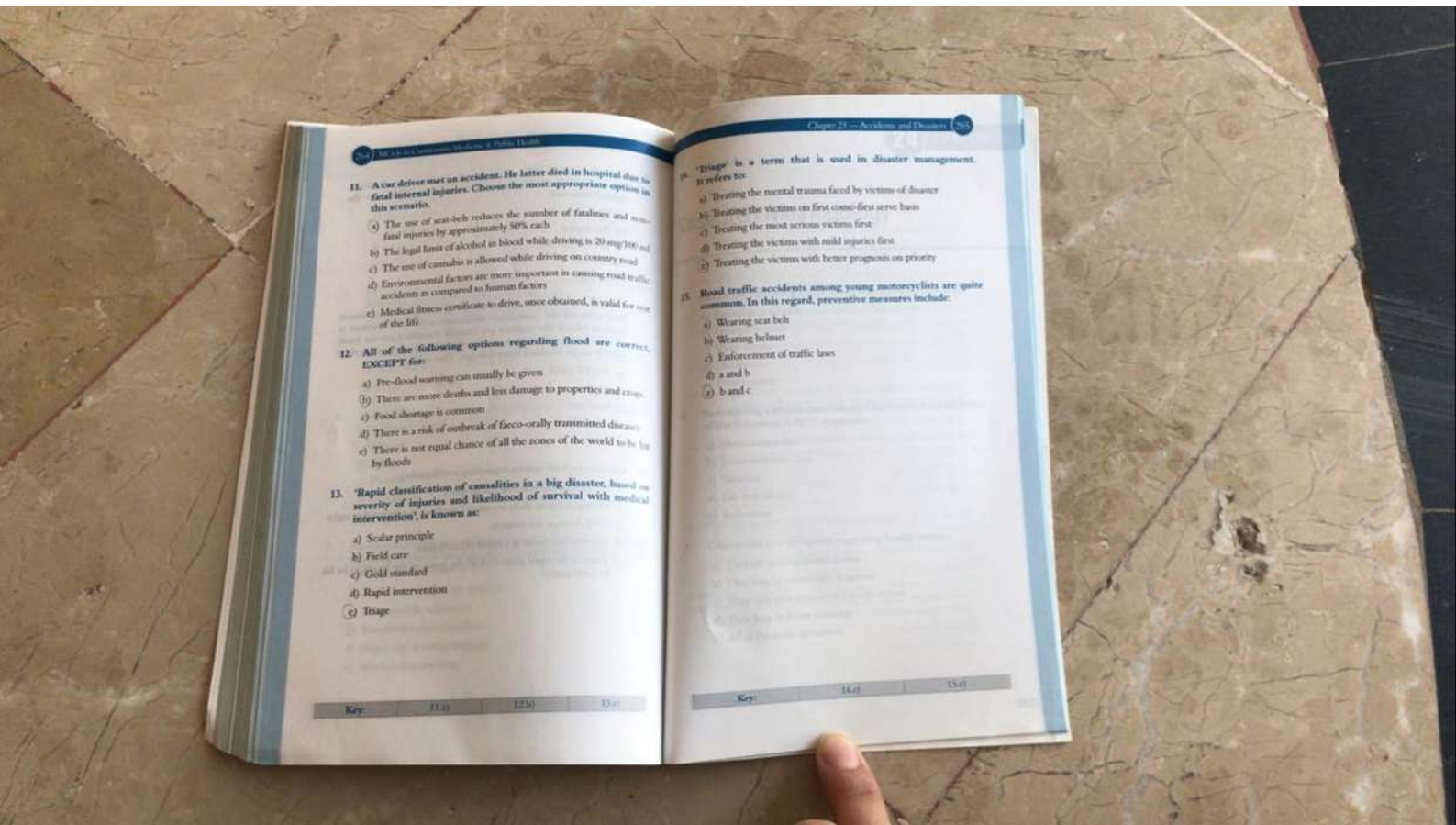
Key: 4.d) 5.a) 6.b) 7.c)

8. **On 8th October, 2005 an earthquake hit northern Pakistan. Approximately 87,000 people lost their lives. What was the type of disaster?**
   a) Meteorological
   b) Topological
   c) Telluric/Tectonic
   d) Accident
   e) Drought

9. **In case of a major disaster, the health care providers cannot deal with all the causalities simultaneously. So a method is used in which the victims are rapidly classified on the basis of severity of their injury and the likelihood of their survival with prompt medical intervention. This is known as:**
   a) POSDCORB
   b) Tagging
   c) Field care
   d) Relief phase
   e) Triage

10. **Choose the best option regarding earthquakes.**
    a) Pre-earthquake warning can be given
    b) During day time there are more causalities as compared to night
    c) Food shortage is common
    d) Tsunami can occur as a result of earthquake
    e) There is an equal chance of all the zones of the world to be hit by earthquakes

Key: 8.c) 9.e) 10.d)



264 | MCQs in Community Medicine & Public Health

11. **A car driver met an accident. He latter died in hospital due to fatal internal injuries. Choose the most appropriate option in this scenario.**
   a) The use of seat-belt reduces the number of fatalities and non-fatal injuries by approximately 50% each
   b) The legal limit of alcohol in blood while driving is 20 mg/100 ml
   c) The use of cannabis is allowed while driving on country road
   d) Environmental factors are more important in causing road traffic accidents as compared to human factors
   e) Medical fitness certificate to drive, once obtained, is valid for rest of the life

12. **All of the following options regarding flood are correct, EXCEPT for:**
   a) Pre-flood warning can usually be given
   b) There are more deaths and less damage to properties and crops
   c) Food shortage is common
   d) There is a risk of outbreak of faeco-orally transmitted diseases
   e) There is not equal chance of all the zones of the world to be hit by floods

13. **'Rapid classification of casualities in a big disaster, based on severity of injuries and likelihood of survival with medical intervention', is known as:**
   a) Scalar principle
   b) Field care
   c) Gold standard
   d) Rapid intervention
   e) Triage

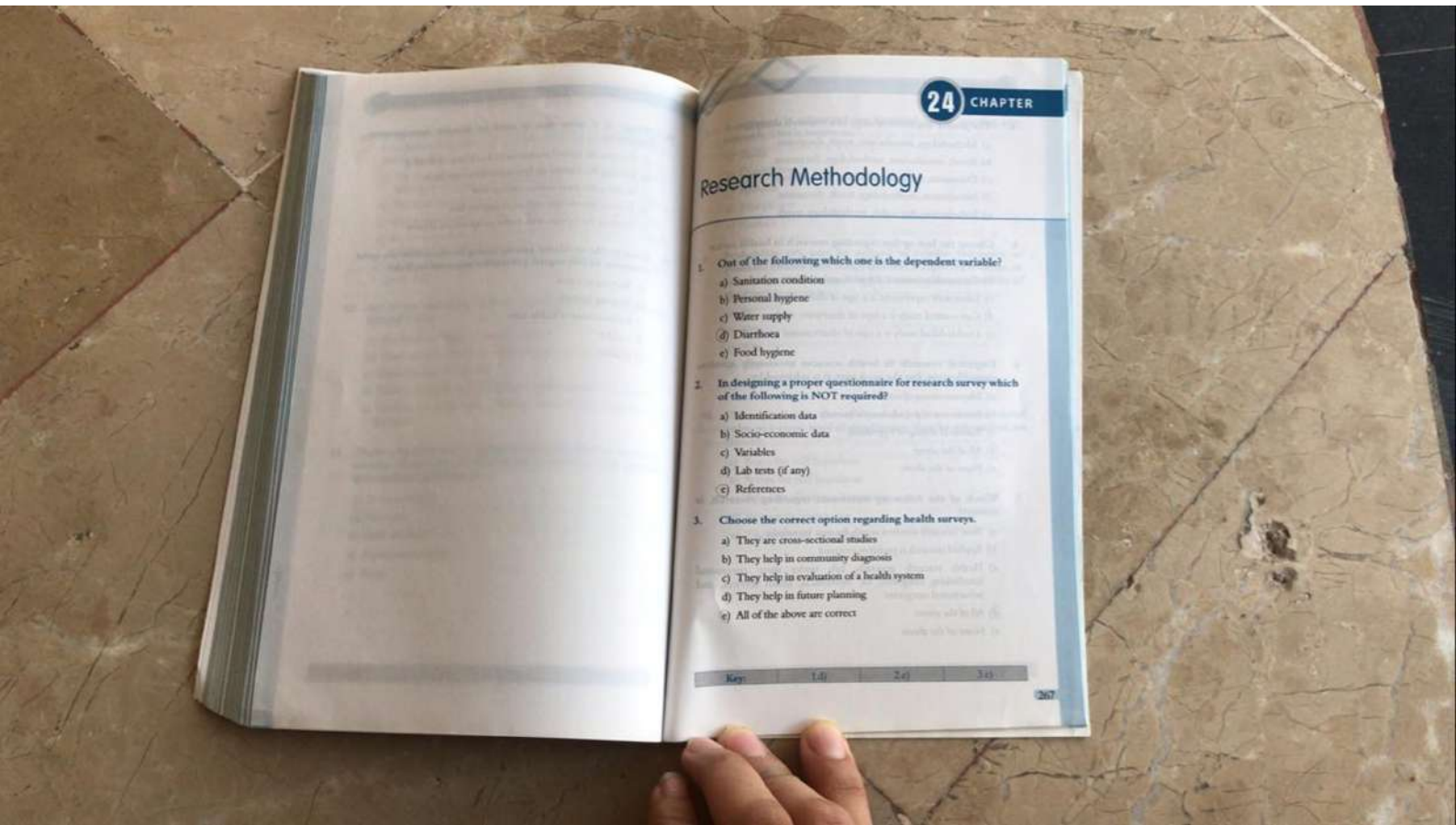
Key:	11.(a)	12.(b)	13.(e)

Chapter 21 — Accidents and Disasters | 265

14. **'Triage' is a term that is used in disaster management. It refers to:**
   a) Treating the mental trauma faced by victims of disaster
   b) Treating the victims on first come-first serve basis
   c) Treating the most serious victims first
   d) Treating the victims with mild injuries first
   e) Treating the victims with better prognosis on priority

15. **Road traffic accidents among young motorcyclists are quite common. In this regard, preventive measures include:**
   a) Wearing seat belt
   b) Wearing helmet
   c) Enforcement of traffic laws
   d) a and b
   e) b and c

Key:	14.(c)	15.(e)



24 CHAPTER

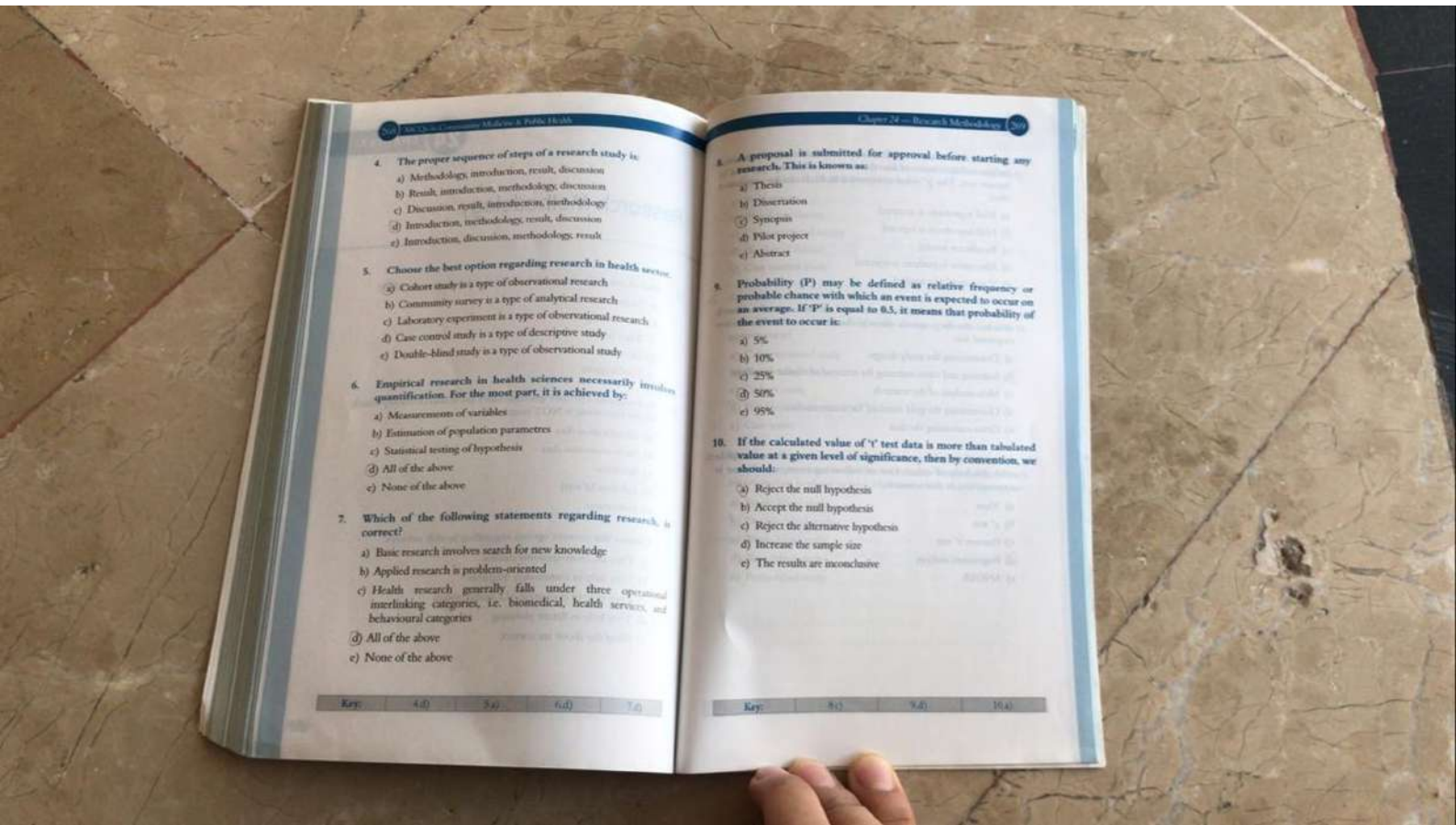
Research Methodology

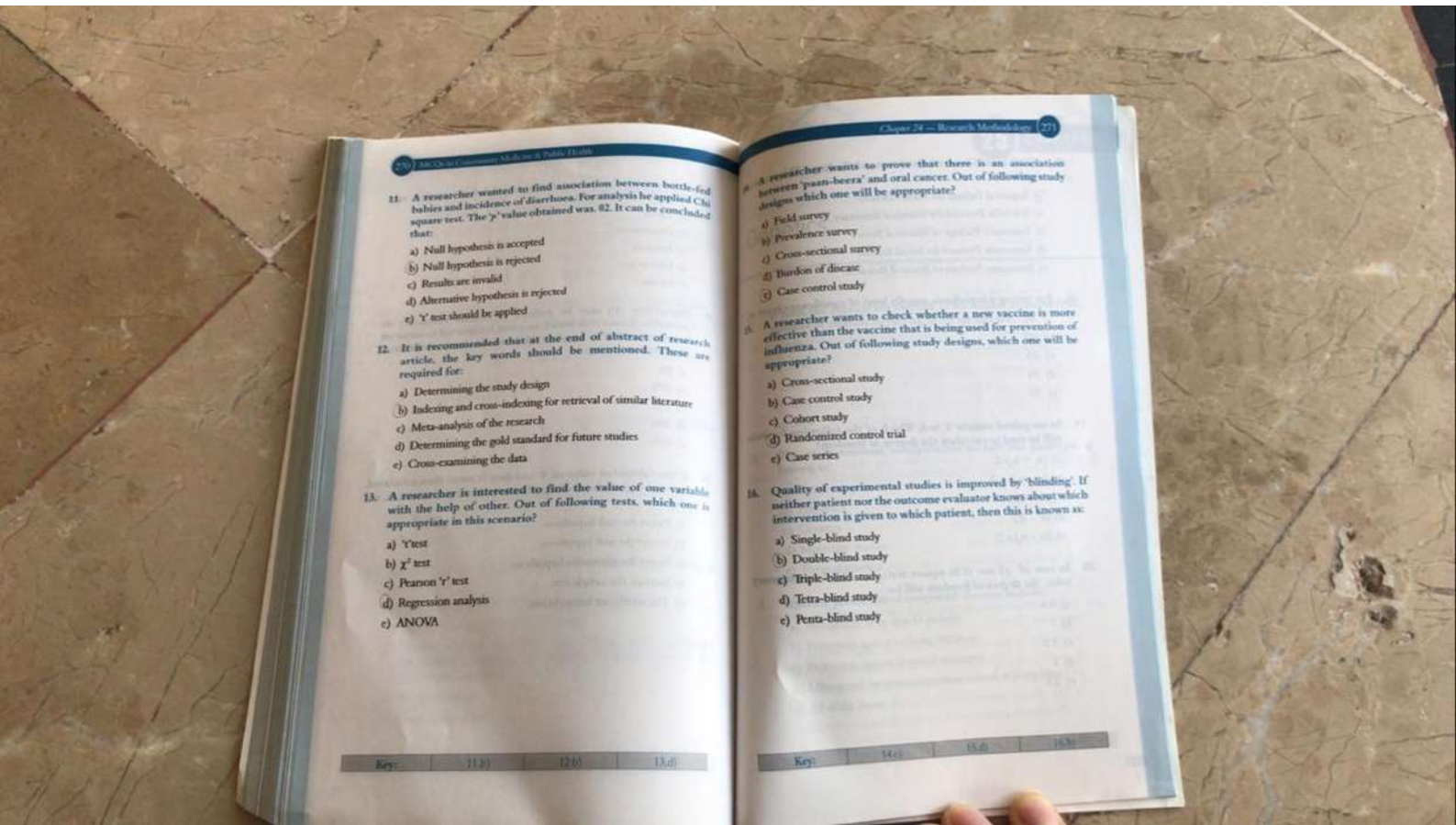
1. **Out of the following which one is the dependent variable?**
   a) Sanitation condition
   b) Personal hygiene
   c) Water supply
   d) Diarrhoea
   e) Food hygiene

2. **In designing a proper questionnaire for research survey which of the following is NOT required?**
   a) Identification data
   b) Socio-economic data
   c) Variables
   d) Lab tests (if any)
   e) References

3. **Choose the correct option regarding health surveys.**
   a) They are cross-sectional studies
   b) They help in community diagnosis
   c) They help in evaluation of a health system
   d) They help in future planning
   e) All of the above are correct

Key:	1.d)	2.e)	3.e)


4. The proper sequence of steps of a research study is:
a) Methodology, introduction, result, discussion
b) Result, introduction, methodology, discussion
c) Discussion, result, introduction, methodology
d) Introduction, methodology, result, discussion
e) Introduction, discussion, methodology, result
5. Choose the best option regarding research in health sector.
a) Cohort study is a type of observational research
b) Community survey is a type of analytical research
c) Laboratory experiment is a type of observational research
d) Case control study is a type of descriptive study
e) Double-blind study is a type of observational study
6. Empirical research in health sciences necessarily involves quantification. For the most part, it is achieved by:
a) Measurements of variables
b) Estimation of population parametres
c) Statistical testing of hypothesis
d) All of the above
e) None of the above
7. Which of the following statements regarding research, is correct?
a) Basic research involves search for new knowledge
b) Applied research is problem-oriented
c) Health research generally falls under three operational interlinking categories, i.e. biomedical, health services, and behavioural categories
d) All of the above
e) None of the above
Key: 4.(d) 5.(a) 6.(d) 7.(d)
8. A proposal is submitted for approval before starting any research. This is known as:
a) Thesis
b) Dissertation
c) Synopsis
d) Pilot project
e) Abstract
9. Probability (P) may be defined as relative frequency or probable chance with which an event is expected to occur on an average. If 'P' is equal to 0.5, it means that probability of the event to occur is:
a) 5%
b) 10%
c) 25%
d) 50%
e) 95%
10. If the calculated value of 't' test data is more than tabulated value at a given level of significance, then by convention, we should:
a) Reject the null hypothesis
b) Accept the null hypothesis
c) Reject the alternative hypothesis
d) Increase the sample size
e) The results are inconclusive
Key: 8.(c) 9.(d) 10.(a)



11. A researcher wanted to find association between bottle-fed babies and incidence of diarrhoea. For analysis he applied Chi square test. The 'p' value obtained was, .02. It can be concluded that:
a) Null hypothesis is accepted
b) Null hypothesis is rejected
c) Results are invalid
d) Alternative hypothesis is rejected
e) 't' test should be applied

12. It is recommended that at the end of abstract of research article, the key words should be mentioned. These are required for:
a) Determining the study design
b) Indexing and cross-indexing for retrieval of similar literature
c) Meta-analysis of the research
d) Determining the gold standard for future studies
e) Cross-examining the data

13. A researcher is interested to find the value of one variable with the help of other. Out of following tests, which one is appropriate in this scenario?
a) 't' test
b) χ^2 test
c) Pearson 'r' test
d) Regression analysis
e) ANOVA

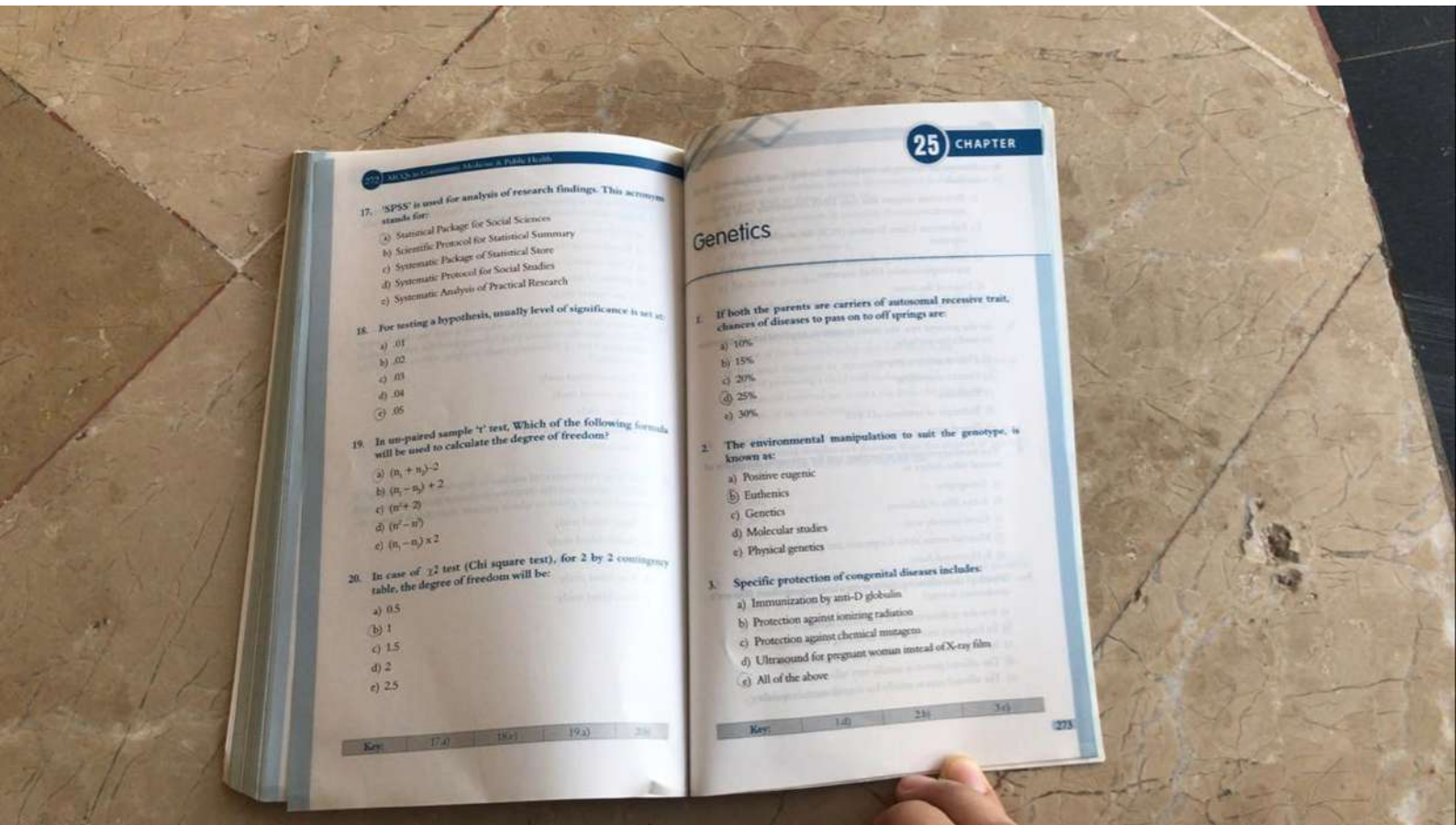
Key: 11.b) 12.b) 13.d)

14. A researcher wants to prove that there is an association between 'paan-beera' and oral cancer. Out of following study designs which one will be appropriate?
a) Field survey
b) Prevalence survey
c) Cross-sectional survey
d) Burden of disease
e) Case control study

15. A researcher wants to check whether a new vaccine is more effective than the vaccine that is being used for prevention of influenza. Out of following study designs, which one will be appropriate?
a) Cross-sectional study
b) Case control study
c) Cohort study
d) Randomized control trial
e) Case series

16. Quality of experimental studies is improved by 'blinding'. If neither patient nor the outcome evaluator knows about which intervention is given to which patient, then this is known as:
a) Single-blind study
b) Double-blind study
c) Triple-blind study
d) Tetra-blind study
e) Penta-blind study

Key: 14.e) 15.d) 16.b)



17. **'SPSS' is used for analysis of research findings. This acronym stands for:**
a) Statistical Package for Social Sciences
b) Scientific Protocol for Statistical Summary
c) Systematic Package of Statistical Store
d) Systematic Protocol for Social Studies
e) Systematic Analysis of Practical Research

18. **For testing a hypothesis, usually level of significance is set at:**
a) .01
b) .02
c) .03
d) .04
e) .05

19. **In un-paired sample 't' test, Which of the following formula will be used to calculate the degree of freedom?**
a) $(n_1 + n_2)-2$
b) $(n_1 - n_2) + 2$
c) $(n^2 + 2)$
d) $(n^2 - n^2)$
e) $(n_1 - n_2) \times 2$

20. **In case of $\chi 2$ test (Chi square test), for 2 by 2 contingency table, the degree of freedom will be:**
a) 0.5
b) 1
c) 1.5
d) 2
e) 2.5

Key:	17.a)	18.c)	19.a)	20.b)

25 CHAPTER

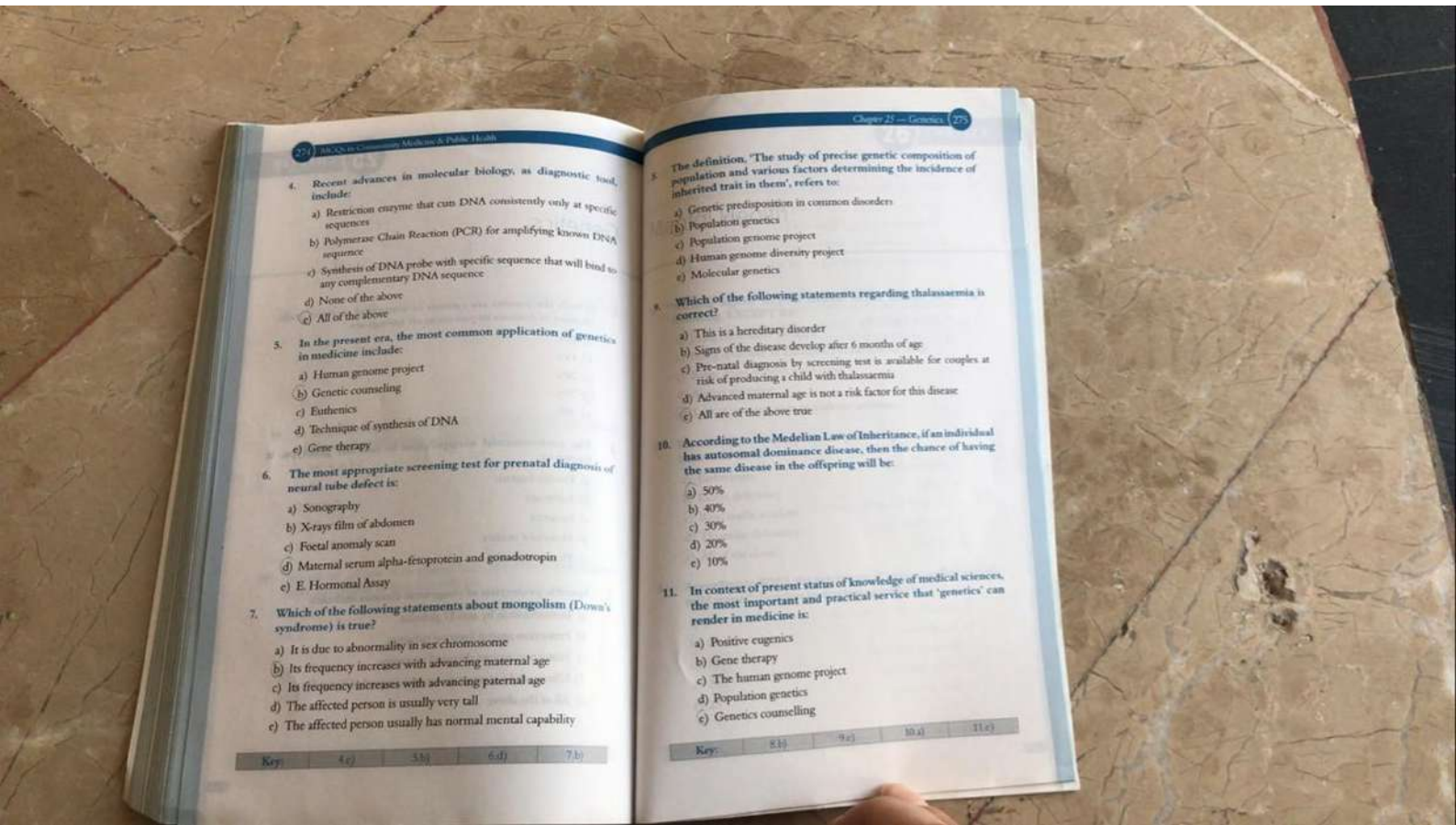
Genetics

1. **If both the parents are carriers of autosomal recessive trait, chances of diseases to pass on to off springs are:**
a) 10%
b) 15%
c) 20%
d) 25%
e) 30%

2. **The environmental manipulation to suit the genotype, is known as:**
a) Positive eugenic
b) Euthenics
c) Genetics
d) Molecular studies
e) Physical genetics

3. **Specific protection of congenital diseases includes:**
a) Immunization by anti-D globulin
b) Protection against ionizing radiation
c) Protection against chemical mutagens
d) Ultrasound for pregnant woman instead of X-ray film
e) All of the above

Key:	1.d)	2.b)	3.e)



4. **Recent advances in molecular biology, as diagnostic tool, include:**
   a) Restriction enzyme that cuts DNA consistently only at specific sequences
   b) Polymerase Chain Reaction (PCR) for amplifying known DNA sequence
   c) Synthesis of DNA probe with specific sequence that will bind to any complementary DNA sequence
   d) None of the above
   e) All of the above

5. **In the present era, the most common application of genetics in medicine include:**
   a) Human genome project
   b) Genetic counseling
   c) Euthenics
   d) Technique of synthesis of DNA
   e) Gene therapy

6. **The most appropriate screening test for prenatal diagnosis of neural tube defect is:**
   a) Sonography
   b) X-rays film of abdomen
   c) Foetal anomaly scan
   d) Maternal serum alpha-fetoprotein and gonadotropin
   e) E Hormonal Assay

7. **Which of the following statements about mongolism (Down's syndrome) is true?**
   a) It is due to abnormality in sex chromosome
   b) Its frequency increases with advancing maternal age
   c) Its frequency increases with advancing paternal age
   d) The affected person is usually very tall
   e) The affected person usually has normal mental capability

Key:	4.e)	5.b)	6.d)	7.b)

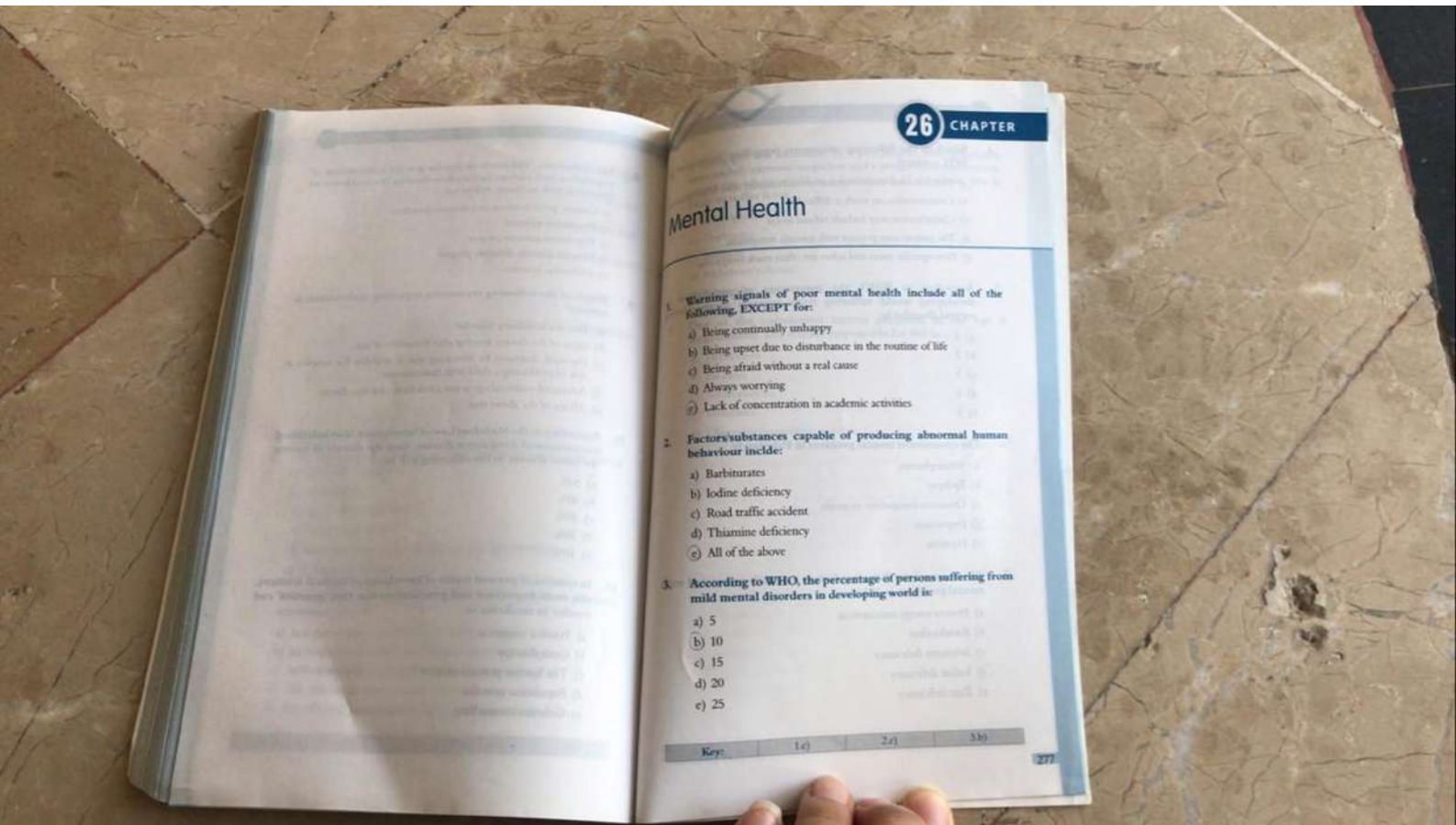
8. **The definition, "The study of precise genetic composition of population and various factors determining the incidence of inherited trait in them", refers to:**
   a) Genetic predisposition in common disorders
   b) Population genetics
   c) Population genome project
   d) Human genome diversity project
   e) Molecular genetics

9. **Which of the following statements regarding thalassaemia is correct?**
   a) This is a hereditary disorder
   b) Signs of the disease develop after 6 months of age
   c) Pre-natal diagnosis by screening test is available for couples at risk of producing a child with thalassaemia
   d) Advanced maternal age is not a risk factor for this disease
   e) All are of the above true

10. **According to the Medelian Law of Inheritance, if an individual has autosomal dominance disease, then the chance of having the same disease in the offspring will be:**
    a) 50%
    b) 40%
    c) 30%
    d) 20%
    e) 10%

11. **In context of present status of knowledge of medical sciences, the most important and practical service that 'genetics' can render in medicine is:**
    a) Positive eugenics
    b) Gene therapy
    c) The human genome project
    d) Population genetics
    e) Genetics counselling

Key:	8.b)	9.e)	10.a)	11.e)



26 CHAPTER

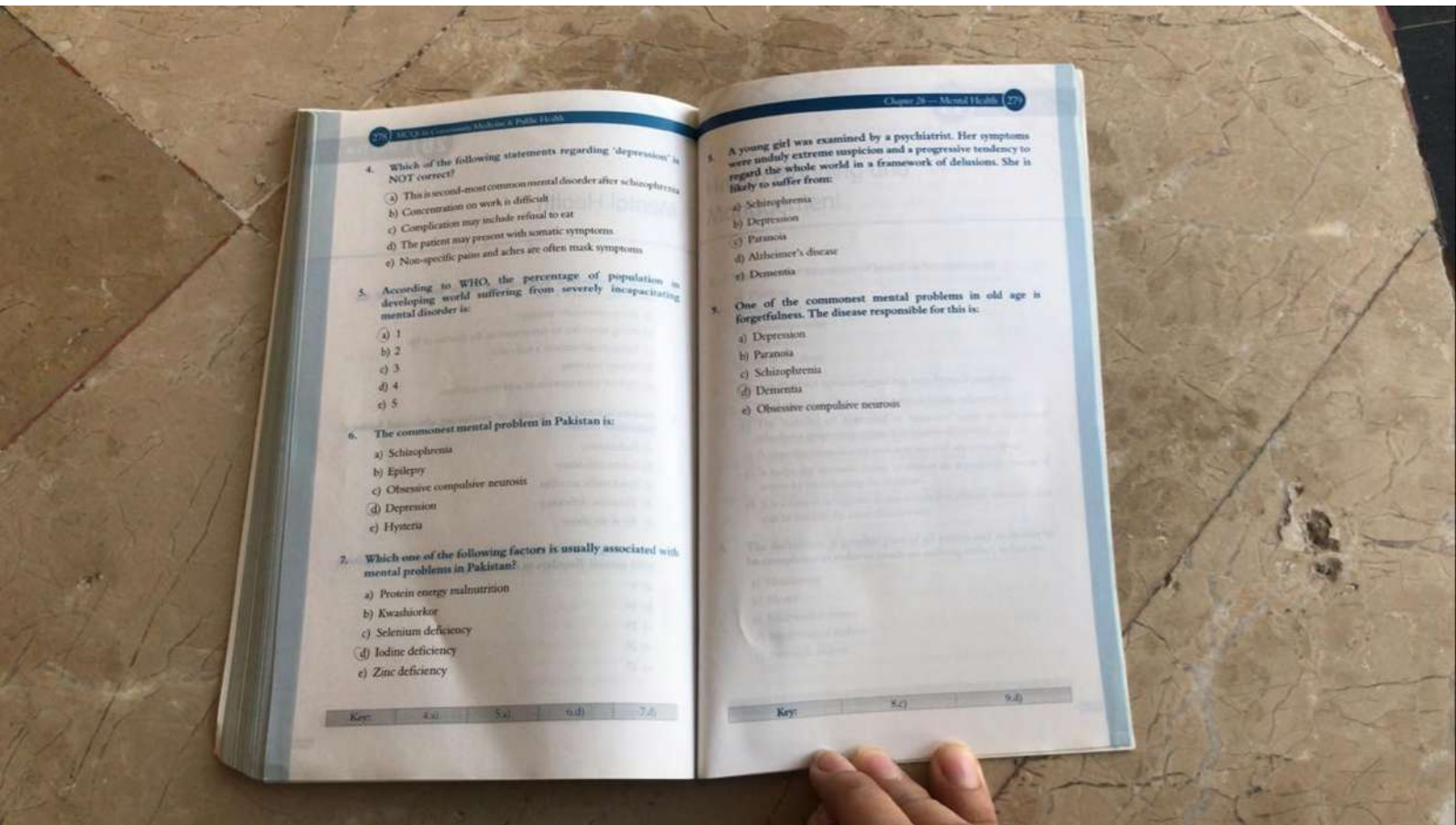
Mental Health

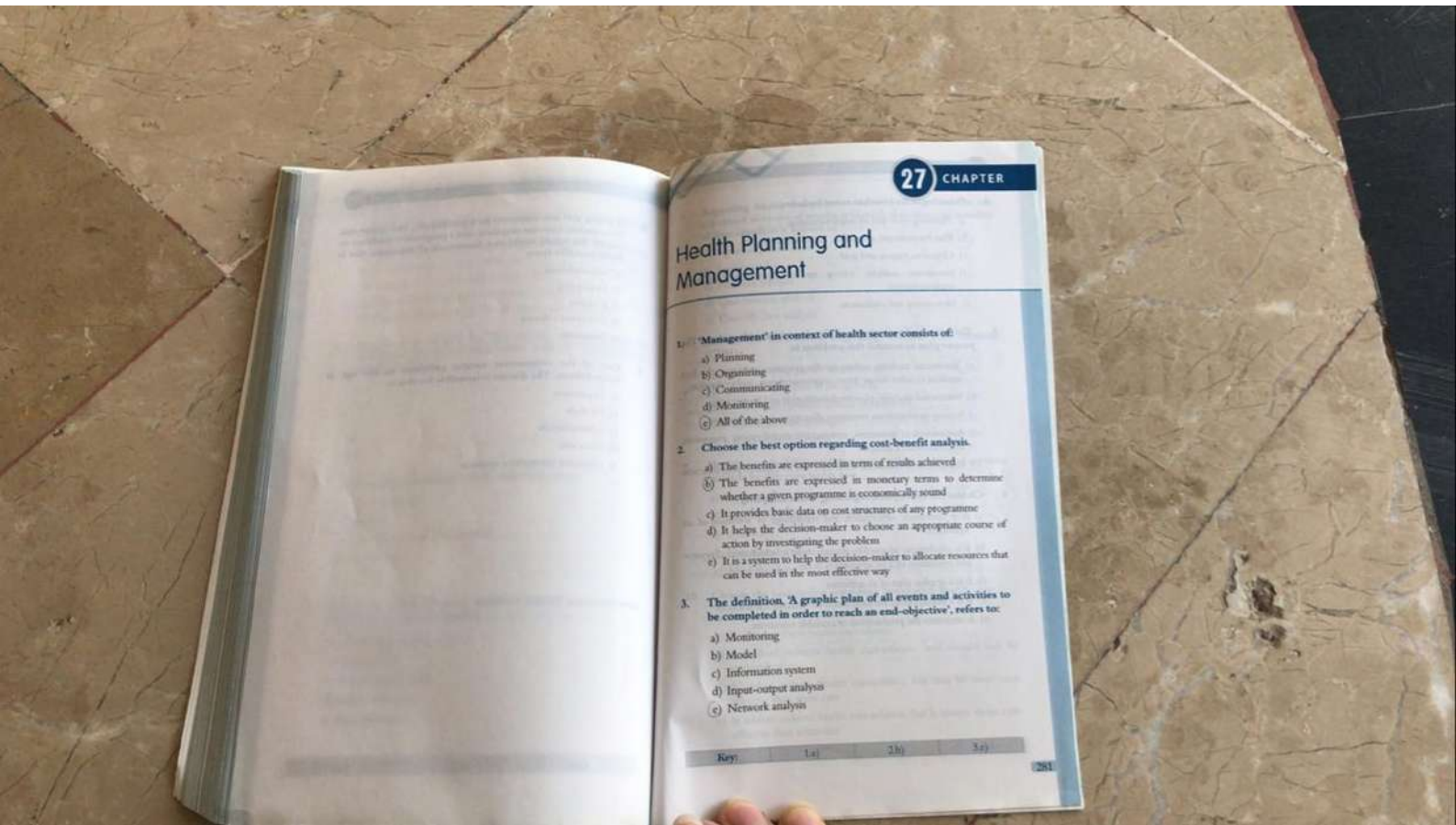
1. **Warning signals of poor mental health include all of the following, EXCEPT for:**
   a) Being continually unhappy
   b) Being upset due to disturbance in the routine of life
   c) Being afraid without a real cause
   d) Always worrying
   e) Lack of concentration in academic activities

2. **Factors/substances capable of producing abnormal human behaviour incide:**
   a) Barbiturates
   b) Iodine deficiency
   c) Road traffic accident
   d) Thiamine deficiency
   e) All of the above

3. **According to WHO, the percentage of persons suffering from mild mental disorders in developing world is:**
   a) 5
   b) 10
   c) 15
   d) 20
   e) 25

Key:	1.c)	2.e)	3.b)


278 MCQs in Community Medicine & Public Health
4. Which of the following statements regarding 'depression' is NOT correct?
a) This is second-most common mental disorder after schizophrenia
b) Concentration on work is difficult
c) Complication may include refusal to eat
d) The patient may present with somatic symptoms
e) Non-specific pains and aches are often mask symptoms
5. According to WHO, the percentage of population in developing world suffering from severely incapacitating mental disorder is:
a) 1
b) 2
c) 3
d) 4
e) 5
6. The commonest mental problem in Pakistan is:
a) Schizophrenia
b) Epilepsy
c) Obsessive compulsive neurosis
d) Depression
e) Hysteria
7. Which one of the following factors is usually associated with mental problems in Pakistan?
a) Protein energy malnutrition
b) Kwashiorkor
c) Selenium deficiency
d) Iodine deficiency
e) Zinc deficiency
Key: 4.a) 5.a) 6.d) 7.d)
Chapter 26 — Mental Health 279
8. A young girl was examined by a psychiatrist. Her symptoms were unduly extreme suspicion and a progressive tendency to regard the whole world in a framework of delusions. She is likely to suffer from:
a) Schizophrenia
b) Depression
c) Paranoia
d) Alzheimer's disease
e) Dementia
9. One of the commonest mental problems in old age is forgetfulness. The disease responsible for this is:
a) Depression
b) Paranoia
c) Schizophrenia
d) Dementia
e) Obsessive compulsive neurosis
Key: 8.c) 9.d)



27 CHAPTER

Health Planning and Management

1. **'Management' in context of health sector consists of:**
   a) Planning
   b) Organizing
   c) Communicating
   d) Monitoring
   e) All of the above

2. **Choose the best option regarding cost-benefit analysis.**
   a) The benefits are expressed in term of results achieved
   b) The benefits are expressed in monetary terms to determine whether a given programme is economically sound
   c) It provides basic data on cost structures of any programme
   d) It helps the decision-maker to choose an appropriate course of action by investigating the problem
   e) It is a system to help the decision-maker to allocate resources that can be used in the most effective way

3. **The definition, 'A graphic plan of all events and activities to be completed in order to reach an end-objective', refers to:**
   a) Monitoring
   b) Model
   c) Information system
   d) Input-output analysis
   e) Network analysis

Key: 1.e) 2.b) 3.e)

4. **Planning in its broadest sense includes:**
   a) Planning cycle and its implementation
   b) Plan formulation, execution, and evaluation
   c) Objective, targets and goal
   d) Situational analysis setting up the priorities and their implementation
   e) Monitoring and evaluation

5. **There is a high prevalence of diarrhoea in an urban slum. The proper plan to control this problem is:**
   a) Situational analysis, setting up the priorities, selecting the best method to solve the problem, implementation, and evaluation
   b) Situational analysis, plan implementation and monitoring
   c) Seting up objectives, resources allocation, and evaluation
   d) Assessment of resources, community mobilization, execution, and cost-benefit analysis
   e) Assessment of resources, write-ups, and formulated plan of action

6. **Choose the best option regarding 'work sampling'.**
   a) It is systematic observation and recordings of activities of an individual
   b) It is a technique adopted by management in which critical review and evaluation of a programme is made
   c) It is a graphic plan of all activities
   d) It is a management method based on behavioural sciences
   e) It measures the productivity of available resources

Key:	4.b)	5.a)	6.a)

7. **Regarding health campaign evaluation; if the benefits are expressed in terms of results achieved, (For example number of lives saved) it is known as:**
   a) Input-output analysis
   b) System analysis
   c) Network analysis
   d) Cost-benefits analysis
   e) Cost-effective analysis

8. **Choose the best option regarding 'Critical Path Method' (CPM).**
   a) It is the shortest path of the network
   b) It is the longest path of the network
   c) It is the most common path of the network
   d) It is an organization design
   e) It is information system

9. **Health care is different from many other goods and services because health care needs are:**
   a) Irregular
   b) Sometimes a matter of life and death
   c) Uncertain
   d) Considered a right
   e) All of the above

10. **Choose the best option regarding 'preventive health care'.**
    a) It usually reduces health expenditure
    b) It always reduces health expenditure
    c) It seldom reduces health expenditure, and should not be undertaken
    d) It seldom reduces health expenditure, but may be more cost-effective than acute care
    e) It seldom reduces health expenditure, but is always more cost-effective than acute care

Key:	7.e)	8.b)	9.e)	10.d)

11. **While evaluating a new vaccine, a doctor estimates the number of lives saved by using the vaccine. Out of following which quantitative method of health management is being used in this study?**

a) Cost-benefit analysis
b) Cost-effective analysis
c) Cost-accounting
d) Input-output analysis
e) System analysis

12. **People of an urban slum wanted to have a specialist doctor, proper roads, restaurant, safe water supply, and proper disposal of waste. The health department recommended provision of safe water and proper sewerage system. The other community demands were deferred for the time being because of lack of funds. This action of health department is known as:**

a) Cost-effective analysis
b) Cost-benefit analysis
c) Prioritization
d) Specific protection
e) Health promotion

13. **A housewife plans a meal so that each part of the menu is completed at the same time Which management technique is using?**

a) Programme Evaluation and Review Technique (PERT)
b) Critical Path Method (CPM)
c) Planning Programming Budgeting System (PPBS)
d) Input-output analysis
e) Organizational design

Key:	11.b)	12.c)	13.a)

14. **In the context of health planning and management techniques the longest path of the 'network' is called:**

a) Program Evaluation and Review Technique (PERT)
b) Critical Path Method (CPM)
c) Planning Programming Budgeting System (PPBS)
d) Input-out put analysis
e) Organizational design

15. **One of the indicators used in Hospital audit is the Bed Occupancy Rate. The correct formula for this is:**

a) $\frac{\text{Sum of admitted patients in a year}}{\text{Total number of beds in hospital x 12}} \times 100$

b) $\frac{\text{Sum of days of admitted patients in a year}}{\text{Total number of beds in hospital x 365}} \times 100$

c) $\frac{\text{Sum of admitted patients in a year}}{\text{Total number of beds in hospital}} \times 100$

d) $\frac{\text{Sum of admitted patients in a year}}{\text{Total number of beds in hospital x 12}} \times 365$

e) $\frac{\text{Sum of admitted patients in a year}}{\text{Total number of beds in hospital x 365}}$

Key:	14.b)	15.b)

16. **'Systematic observations and recording of activities of one or more individuals carried out at predetermined or random intervals'. Which of the following health management techniques does the above mentioned observation refer to?**

a) Planning Programming Budgeting System (PPBS)
b) Network analysis
c) Input-output analysis
d) System analysis
(e) Work sampling

17. **Out of following, which one is 'quantitative health management technique'?**

a) Organizational design
b) Personal management
c) Communication
(d) Cost-effective analysis
e) Management by Objectives (MBO)

Key: 16.(e) 17.(d)

BROUGHT TO YOU BY

MEDAIDPK

EMPOWERING YOU

WITH KNOWLEDGE!

MEDAIDPK.COM