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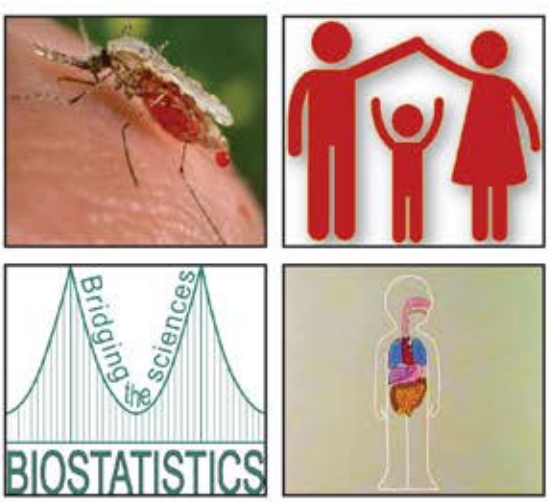
A Must Book for Preparing all PGME Examinations

MCQs in Community Medicine

Based on Park's Textbook of Preventive and Social Medicine, 23rd edition

Highlights of the book

- Topic-wise multiple choice questions (MCQs)
- Based on recent syllabus and vital topics, along with frequently asked questions
- Epidemiology of communicable and non-communicable diseases included
- Covers more than 2,600 MCQs



Ranganath TS

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Chapter

3 Principles and Methods of Epidemiology

1. Epidemiology deals with study of:
A. All health-related events and states in population
B. Epidemic diseases
C. Communicable diseases
D. Communicable and non-communicable diseases *(p. 52)*

2. Epidemiology involves study of:
A. Distribution of disease
B. Determinants of disease
C. Disease frequency
D. All of the above *(p. 52)*

3. The aspect of epidemiology that deals with distribution of disease is:
A. Descriptive B. Analytical
C. Experimental D. Interventional *(p. 53)*

4. The type of epidemiology study that deals with risk factors of disease is:
A. Descriptive
B. Analytical
C. Experimental
D. None of the above *(p. 70)*

5. Discrete variables are all EXCEPT:
A. Color of skin
B. Boys in the class room
C. Weight
D. Leukocyte count *(p. 54)*

6. Which of the following is TRUE about 'making comparison in epidemiological approach'?
A. Both the study and control groups should be similar
B. The comparability can be ensured by randomization
C. Random allocation is not possible in case of control and cohort study
D. All of the above *(p. 71, 82, 84)*

7. All are continuous variables EXCEPT:
A. Serum cholesterol
B. Blood pressure
C. Height
D. Rash in measles *(p. 54)*

8. The numerator is not a component of denominator in:
A. Rate
B. Ratio
C. Proportion
D. None of the above *(p. 55)*

9. Mid-year population refers to population as on:
A. March, 31 B. January, 1
C. July, 1 D. December, 31 *(p. 55)*

1 A 2 D 3 A 4 B 5 C 6 D 7 D 8B 9 C

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10. In international death certificate, most important information to be entered is:

A. Underlying cause of death
B. Disease directly leading to death
C. Significant-associated condition contributing to death
D. None of the above *(p. 56)*

11. Denominator in crude death rate is:

A. Population at risk
B. Mid-year population
C. Total number of births
D. None of the above (*p. 57)*

12. Most useful single measure of mortality is:

A. Case fatality rate
B. Crude death rate
C. Age-specific death rate
D. Proportional mortality rate *(p. 58)*

13. Which of the following is not TRUE about 'case fatality rate'?

A. Ratio of deaths to cases
B. Case fatality rate varies in different epidemics
C. Closely related to virulence
D. Useful even for chronic diseases
(p. 58)

14. The killing power of a disease is represented by:

A. Attack rate
B. Proportional mortality rate
C. Case fatality rate
D. Survival rate *(p. 58)*

15. In an outbreak of cholera in a village of 2,000 population 20 cases have occurred and 5 have died. Case fatality rate is:

A. 1% B. 0.25%
C. 5% D. 25% *(p. 58)*

16. Proportional mortality rate of cancer is equal to:

A. $\frac{\text{Number of deaths due to cancer in a year}}{\text{Total deaths from all causes during one year}} \times 100$

B. $\frac{\text{Number of deaths due to cancer in a year}}{\text{Total number of cancer cases}} \times 100$

C. $\frac{\text{Number of deaths due to cancer in a year}}{\text{Mid-year population}} \times 100$

D. $\frac{\text{Number of deaths due to cancer in a year}}{\text{Population at risk}} \times 100$

(p. 57, 58)

17. The number of deaths in people aged above 50 years as a percentage of total deaths of all age groups is known as:

A. Expectancy of life
B. Proportional mortality ratio
C. Mortality by cause
D. Crude death rate *(p. 58)*

18. Which of the following is not TRUE about proportional mortality rate?

A. Used when population data are not available
B. Of value in making comparison between population groups
C. Does not indicate the risk of dying from the disease
D. Useful indicator of importance of the specific disease as a cause of death within any population group
(p. 57, 58)

10 A 11 B 12 C 13 D 14 C 15 D 16 A 17 B 18 B

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19. Standardized mortality ratio is:

A. $\frac{\text{Observed deaths}}{\text{Expected deaths}} \times 100$

B. $\frac{\text{Observed death + Expected death}}{2}$

C. $\frac{\text{Observed death + Expected death}}{\text{Standardizing factor}}$

D. $\frac{\text{Observed deaths}}{\text{Expected death}} \times \text{Standardizing factor}$

(p. 60)

20. True facts about standardized mortality ratio are all EXCEPT:

A. Ratio of observed death and expected death
B. Total number of deaths per year
C. Can be calculated even if age specific data is not available
D. Is useful for comparison

(p. 59, 60)

21. Age-adjusted summary of current all causes of mortality is:

A. Multivariate analysis
B. Proportional mortality rate
C. Life table
D. Regression technique standardization *(p. 60)*

22. Which of the following indicates severity of illness?

A. Case fatality rate
B. Prevalence rate
C. Proportional mortality rate
D. Incidence rate *(p. 58)*

23. Incidence is defined as:

A. Number of cases existing in a given population at a given moment
B. Number of cases existing in a given period
C. Number of new cases occurring during a specified period in a given population
D. Number of old cases present during a specified period in a given population *(p. 60)*

24. All are true of attack rate EXCEPT:

A. It is a type of prevalence rate
B. Expressed as percentage
C. Used when population is exposed to risk for a limited period of time
D. Reflects extent of epidemic

(p. 60, 61)

25. Total number of cases at a given point of time in a given population is:

A. Incidence B. Prevalence
C. Epidemiology D. Attack rate *(p. 61)*

26. Consider the following data necessary for the calculation of prevalence rate of a disease in a community in a specified period would include:

i. The number of new cases detected
ii. The number of persisting cases
iii. The population at risk

A. All of the above B. i and ii
C. ii and iii D. i and iii *(p. 61)*

27. A village with 2,000 population was surveyed for 1 year and 10 were found to be diseased. Assuming that the disease lasts for 2 years. Prevalence is:

A. 20/1,000 B. 30/1,000
C. 10/1,000 D. 50/1,000 *(p. 61)*

28. If P indicates prevalence, I—incidence and D—duration of illness, then the relationship between prevalence and incidence is expressed as:

A. $P = I \times D$
B. $I = P \times D$
C. $P = I/D$
D. None of the above *(p. 62)*

19 A 20 B 21 C 22 A 23 C 24 A 25 B 26 A
27 C 28 A

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29. Prevalence is useful:
A. To identity potential high-risk population
B. To control disease
C. For distribution of disease
D. Efficacy of preventive and therapeutic measure *(p. 61, 62)*

30. Community intervention studies are:
A. Cohort study
B. Cross sectional study
C. Community trials
D. Correlational study *(p. 62)*

31. Which of the following epidemiologic method uses individuals as unit of study?
A. Cross-sectional study
B. Randomized controlled trials
C. Case control study
D. All of the above *(p. 62)*

32. In which of the following study there is an active attempt to change a disease determinant or the progress of a disease:
A. Observational study
B. Descriptive study
C. Analytical study
D. Experimental study *(p. 62)*

33. All are features of point source epidemic EXCEPT:
A. Epidemic curve rises and falls rapidly
B. Epidemic tends to be explosive
C. Epidemic curve shows no secondary waves
D. Epidemic continues over more than one incubation period *(p. 64)*

34. Bhopal gas tragedy is an example of:
A. Point source epidemic
B. Continuous epidemic
C. Propagated epidemic
D. Slow epidemic *(p. 64)*

35. Which option is correct for the following statement?
Propagated epidemic curve is characterized by:
i. Many peaks
ii. More than one incubation period
iii. Steep and abrupt onset
iv. Prolonged epidemic tail
A. i and iv are correct
B. ii and iii are correct
C. i, ii and iv are correct
D. All are correct *(p. 65)*

36. All of the following show seasonal trend EXCEPT:
A. Measles
B. Automobile accidents
C. Sunstroke
D. Hay fever *(p. 65)*

37. Influenza pandemics occur at intervals of:
A. 2–3 years B. 3–4 years
C. 7–10 years D. 10–12 years *(p. 65)*

38. Cyclic trend is seen in all EXCEPT:
A. Chicken pox B. Influenza
C. Rubella D. Measles *(p. 65)*

39. Which is not a likely explanation for cyclic trend of disease?
A. Buildup of susceptibles
B. Antigenic variations
C. Environmental conditions
D. Herd immunity variations *(p. 65)*

40. Secular trend of disease refers to its:
A. Change of pattern over a long period of time
B. Seasonal trend
C. Occurs due to naturally occurring variation in herd immunity
D. Current disease status problem *(p. 66)*

29 A	30 C	31 D	32 D	33 D	34 A	35 C	36 B	37 C
38 A	39 C	40 A						

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41. When a disease frequency is measured over a period of several years or decades, it is called:
A. Seasonal trends
B. Cyclic trends
C. Secular trends
D. None of the above *(p. 66)*

42. Which of the following disease is more common in rural areas?
A. Chronic bronchitis
B. Lung cancer
C. Zoonotic diseases
D. Drug dependence *(p. 66)*

43. Knowledge of geographic distribution of disease helps to make all the following EXCEPT:
A. International comparison
B. Urban-rural comparison
C. Male-female comparison
D. Local distribution of disease *(p. 66)*

44. The host factor strongly related to disease is:
A. Age B. Sex
C. Marital status D. Occupation
(p. 68)

45. The following diseases have a bimodal distribution EXCEPT:
A. Breast cancer in females
B. Cervix cancer
C. Leukemia
D. Hodgkin's lymphoma *(p. 68)*

46. The following study gives incidence rate of a disease:
A. Longitudinal study
B. Experimental study
C. Randomized controlled trial
D. Case control study *(p. 70)*

47. Which of the following statements is NOT TRUE about the cross-sectional studies?
A. Based on a single examination at one point in time
B. More useful for chronic disease
C. Provides little information about natural history of disease
D. Can help in identifying risk factors of disease *(p. 69)*

48. Data about prevalence and distribution of illness and state of health of a community at one point of time is given by:
A. Longitudinal study
B. Cross-sectional study
C. Double blind study
D. Surveillance *(p. 69)*

49. Prevalence of disease is estimated from:
A. Case control study
B. Cross-sectional study
C. Cohort study
D. Randomized trial *(p. 69)*

50. Analytical studies are undertaken to:
A. Determine the occurrence and distribution of disease
B. Screening of new cases in the community
C. Test the etiological hypothesis
D. None of the above *(p. 70)*

51. Case control studies are:
A. Prospective studies
B. Retrospective studies
C. Cross-sectional studies
D. None of the above *(p. 71)*

52. A study conducted on babies born between January 1, 1970 and December 31, 1970 would be:
A. Retrospective
B. Prospective
C. Cohort study
D. None of the above *(p. 75)*

41 C 42 C 43 C 44 A 45 B 46 A 47 D 48 B 49 B
50 C 51 B 52 C

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53. Which of the following is TRUE about 'case control study'?
A. Both the exposure and disease have occurred before the start of study
B. Study proceeds backwards from effect to cause
C. Uses comparison group to support an inference
D. All of the above *(p. 71)*

54. In epidemiological studies, important criterion for control group is that it should be:
A. Age and socioeconomic status matched
B. Equal in number
C. That the factor to be studied should be absent
D. That the factor to be studied should be present *(p. 71)*

55. Which one of the following is NOT TRUE about 'case control study'?
A. Only newly diagnosed cases within a specified time are eligible
B. The controls must be free from disease under study
C. Relative risk can be exactly determined from case control study
D. Ensure comparability between cases and controls *(p. 73)*

56. Which of the following is an odds ratio?
A. Proportional mortality rate
B. Attributable risk
C. Association between risk factor and outcome
D. Relative risk *(p. 73)*

57. Odds ratio is derived from:
A. Case control study
B. Cohort study
C. Cross-sectional study
D. Randomized trial *(p. 73)*

58. 'Confounding bias' in a case control study can be removed by:
A. Double blinding
B. By properly recalling events
C. Matching
D. By selecting representative population *(p. 73)*

59. Which one of the following is NOT TRUE of case control study?
A. Easy to organize
B. Selection of appropriate control group may be difficult
C. Time consuming
D. Inexpensive *(p. 74)*

60. Regarding case control study all are correct EXCEPT:
A. Risk factors can be identified
B. It measures incidence
C. Used in the study of rare diseases
D. Requires few subjects *(p. 74)*

61. All of the following are true about case control study EXCEPT:
A. Multiple disease etiology is studied
B. No risk to subjects
C. Disease sequence is not traced
D. Variable outcomes studied *(p. 74)*

62. Which of the following is not true about 'cohort study'?
A. Prospective study
B. Type of analytical study
C. Study proceeds from cause to effect
D. Study is short-lived and technique is crude *(p. 75)*

63. About cohort study all are true EXCEPT:
A. Two groups should be comparable
B. Groups should be equally susceptible
C. Eligibility criteria of disease can be defined as time passes on
D. Cohorts must be free from disease under study *(p. 75)*

53 D 54 C 55 C 56 C 57 A 58 C 59 C 60 B 61 D
62 D 63 C

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64. Which of the following statements is NOT TRUE about 'cohort study'?

A. Provides incidence of disease
B. Indicated when there is good evidence of association between exposure and disease
C. Done when incidence of disease is very low among exposed
D. Done when ample funds are available *(p. 75)*

65. All the following can be obtained from prospective study EXCEPT:

A. Attributable risk
B. Prevalence rate
C. Relative risk
D. Incidence rate *(p. 78)*

66. Relative risk of developing a disease is indicated by:

A. Incidence among exposed/incidence among nonexposed
B. Incidence among exposed/population at risk
C. Incidence among exposed –incidence among nonexposed/population at risk
D. Incidence among exposed –incidence among nonexposed *(p. 78)*

67. Relative risk in the following data is:

Smoking	Carcinoma cheek	
	+	–
+	40	990
–	2	1,028

A. 1 B. 5
C. 10 D. 20 *(p. 78)*

68. Relative risk could show an association between:

A. Efficacy of two drugs
B. Oral contraceptive pill (OCP) and pregnancy
C. Altitude and endemic goiter
D. Smoking and lung cancer *(p. 78)*

69. The rate/ratio risk given by following formula 'X' =

$$\frac{\text{Incidence of disease rate among exposed} - \text{Incidence of disease rate among nonexposed}}{\text{Incidence rate among exposed}} \times 100$$

A. Relative risk
B. Population-attributable risk
C. Attributable risk
D. Odds ratio *(p. 78)*

70. Difference in incidence rate of disease between exposed group and non-exposed group is:

A. Risk ratio
B. Relative risk
C. Attributable risk
D. Prevalence rate *(p. 78)*

71. The amount of disease that might be eliminated, if the factor under study could be controlled can be indicated by:

A. Odds ratio
B. Cross-product ratio
C. Relative risk
D. Attributable risk *(p. 78)*

72. All are advantages of the cohort study EXCEPT:

A. Several possible outcomes related to exposure can be studied simultaneously
B. Dose-response ratio can be calculated
C. Bias is minimized
D. Suitable for study of rare diseases *(p. 79)*

64 C 65 B 66 A 67 D 68 D 69 C 70 C 71 D 72 D

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73. Disadvantage of cohort study is:

A. Selection of comparison group is a limiting factor
B. Study itself may alter people's behavior
C. Involves a large number of people
D. All of the above *(p. 79)*

74. Bias is unlikely to invalidate cohort studies used to assess risk of exposure because:

A. Data collection is prospective
B. Large number of subjects is usually included
C. Exposure is usually determined prior to disease occurrence
D. Actual relative risk can be determined *(p. 79)*

75. Which of the following is TRUE about experimental epidemiology?

A. Provide scientific proof of etiological factor that may permit control of those diseases
B. Provide a method of measuring effectiveness and efficiency of health services
C. Epidemiologist observes the natural course of events
D. Conditions in which study is carried out are under the direct control of the investigator *(p. 80)*

76. The randomized controlled trial is a type of:

A. Descriptive study
B. Case control study
C. Experimental study
D. Cohort study *(p. 81)*

77. Experimental epidemiology deals with:

A. Epidemics
B. Intervention
C. Screening of disease
D. Early diagnosis *(p. 80)*

78. Which of the following are associated with 'randomized controlled trials'?

i. Randomization
ii. Selecting reference and experimental population
iii. Avoidance of manipulation (intervention)
iv. Assessment of the outcome of the trial in terms of positive and negative results

A. i, ii and iii
B. i, ii and iv
C. i and iv
D. All are correct *(p. 81)*

79. Which of the following is NOT TRUE about 'randomized controlled trial'?

A. The groups should be representative of population
B. Randomization is an attempt to eliminate bias and allow for comparability
C. Investigator has control over allocation of participants to either study or control group
D. Experimental population should have the same characteristics as reference population
E. Blinding is done to reduce bias *(p. 82)*

80. Randomization is:

A. Mixing control with cases
B. Mixing different types of controls
C. Statistical procedure of allocating participants into study and control groups
D. Selecting characteristics of case group *(p. 82)*

81. Use of a double blind trial is to:

A. Avoid false negative results
B. Avoid subject bias
C. Avoid observer bias
D. Increase true negatives *(p. 83)*

73 D 74 C 75 C 76 C 77 B 78 B 79 C 80 C
81 B and C

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MCQs in Community Medicine

This book is meant to fulfil the needs of medical students and research workers who aspire to pursue higher degrees. An effort has been made to help students in thoroughness of their examination preparation. The contents are arranged as for the convenience of reader to make it easy for recall. The language used is simple. The questions have been framed based on 23rd edition of *Park's Textbook of Preventive and Social Medicine*. This book has a holistic approach to the field of community medicine.



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