

W-14

**Master of Public Health-  
Entrance Examination - 2020**

Hall Ticket Number

Time : 2 hours  
Marks: 100

Total

**PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE  
ANSWERING.**

**INSTRUCTIONS**

1. This booklet has (15) pages. Please check thoroughly for all the pages.
2. Enter the Hall ticket number on the first page of this booklet as well as on the OMR sheet.
3. There is negative marking. For each wrong answer 0.33 marks will be deducted.
4. There are two PARTS in the question paper – PART A (Question nos. 1-25) and PART B (Question nos. 26-100). In case of a tie, marks obtained in PART A will be considered for resolving the tie.
5. Calculators are not permitted

**PART A**

1. The stages of a malignant disease (cancer) is recorded using the symbols 0, I, II, III, IV. We say that the scale used is
  - A. Numerical
  - B. Ordinal
  - C. Alphanumeric
  - D. Nominal
2. Erythrocyte sedimentation rates (ESR) of 7 subjects are 7,5,3,4,6,4,5. calculate the mean
  - A. 5.1
  - B. 4.8
  - C. 4.2
  - D. 5.5
3. In a series of boys, the mean systolic BP was 120 mm and SD was 10 mm. Find out coefficient of variation
  - A. 12
  - B. 7.2
  - C. 8.3
  - D. 1.2

4. In Normal distribution Mean  $\pm$  2 SD limits include \_\_\_\_\_% of all observations
- 95
  - 68
  - 99
  - 75
5. Menstrual cycle in women following normal distribution has a mean of 28 days and SD of 2 days. What is the Relative deviate (Z) score for women having menstrual cycle of less than 22 days.
- 1
  - 2
  - 3
  - 4
6. Research competency includes all except:
- Acquire a spirit of scientific-enquiry and orientation to the principles of research methodology and epidemiology
  - Preserve, protect and withhold findings before it is necessary to communicate at an opportune moment.
  - Critically evaluate data, identify gaps in knowledge, and formulate research questions.
  - Design and implement epidemiological and health systems research studies.
7. Humidity or moisture content of the air is measured using an instrument called:
- Aneroid Barometer
  - Mercury Barometer
  - Air Quality Meter
  - Hygrometer
8. The continuous scrutiny of the factors that determine the occurrence and spread of diseases and other conditions of ill health which are pertinent of effective control is called:
- Social Audit
  - Community Audit
  - Public Health Evaluation
  - Surveillance
9. Disability Adjusted Life Years (DALY) is the sum of:
- Years of Life Lost and Years Lived with Disability
  - Years of Life Lived and Years Lost due to Disability
  - Years of Life Lost and Years Lost due to Disease
  - Years of Life Lost and Years Lost due to Disability
10. Epizootic disease occurrence is when the epidemic is restricted to a:
- Vulnerable Human Population
  - Normal Human Population
  - Geographically confined population.
  - Non-human population.
11. Acceptable daily exposure of sound level limit without substantial damage to hearing is

- A. Upto 85 dB
- B. Upto 100 dB
- C. 60 dB
- D. 75 dB

12. In writing a report on Nutrition survey, which one is the correct sequence for documentation ?

- I. Survey of related studies
  - II. Introduction
  - III. Design of the study
  - IV. Data-Analysis and interpretation
  - V. Generalisations and Conclusion
  - VI. Suggested further study
  - VII. References, Appendix
- A. I, II, III, IV, V, VI, VII
  - B. V, I, VI, III, IV, II, VII
  - C. II, I, III, IV, V, VI, VII
  - D. V, VI, I, III, IV, II, VII

13. Food poisoning is caused by:

- A. *Cl. perfringes*
- B. *Streptococci*
- C. *Vibrio Cholera*
- D. *Salmonella Paratyphi A*

14. Which of the following can be the source of primary data in research?

- A. Survey
- B. Experiment
- C. Survey and Experiment
- D. Survey and Reference

15. A Blue print of Research work is called

- A. Research Problem
- B. Research design
- C. Research tools
- D. Research methods

16. In a left sided skewed curve, true statement is

- A. Mean = Median
- B. Mean < Median
- C. Mean > Mode
- D. Mean = Mode

17. Survey research is cross-sectional and therefore:

- A. High in replicability but low in internal validity
- B. High in internal validity but low in reliability
- C. High in ecological validity but low in external validity
- D. None of the above

18. Sample value is called

- A. Parameter
- B. Core Value
- C. Statistic
- D. Variable

19. Population value is called

- A. Statistic
- B. Parameter
- C. Variable
- D. Core value

20. Which of the following is not the critical feature of qualitative research?

- A. Actual settings are the direct source of data.
- B. Data take the forms of words or pictures.
- C. Seeking to establish relationships among measured social facts.
- D. Researcher becomes immersed in the situation, present or past related to the phenomena.

21. Following statements are true about incidence:

- I. Refers to new cases.
- II. Cohort studies can be used to estimate it.
- III. Denominator is a specified population.
- IV. It does not have reference to a time period.

- A. I, II and IV correct
- B. I, II and III correct
- C. I and II correct
- D. II, III and IV correct

22. Which of the following is not a data-collection method?

- A. Research questions
- B. Unstructured interviewing
- C. Postal survey questionnaires
- D. Participant observation

23. A sampling frame is:

- A. A summary of the various stages involved in designing a survey
- B. An outline view of all the main clusters of units in a sample
- C. A list of all the units in the population from which a sample will be selected
- D. A wooden frame used to display tables of random numbers

24. For a study assessing the role of an exposure in leading to an outcome, what is the correct hierarchy as per strength of the design :

- A. Experimental > Cohort > Cross sectional analytic and Case control > Ecological
- B. Ecological > Experimental > Cohort > Cross sectional analytic and Case control
- C. Experimental > Cross sectional analytic and Case control > Cohort > Ecological
- D. Cohort > Experimental > Cross sectional analytic and Case control > Ecological.

25. The components of validity of screening tests are

- I. Sensitivity
  - II. Specificity
  - III. Positive Predictive Value
  - IV. Negative Predictive Value
- A. I, II and III correct
  - B. I and II correct
  - C. I, III and IV correct
  - D. I and IV correct
- 

**PART B.**

26. Correlation coefficient is a number between

- A. 1 and 2
- B. 0 and 1
- C. -1 and 0
- D. -1 and +1

27. A circle is divided into sectors proportional to the frequency of items shown is called

- A. Pie chart
- B. Bar chart
- C. Frequency Polygon
- D. Histogram

28. The median of following data is: 1, 2, 4, 6, 8, 10, 11, 13.

- A. 9
- B. 6
- C. 8
- D. 7

29. Mean systolic BP among study done among one college students was found to be 120 with SD of 10. Calculate the minimum size of the sample to verify the results if allowable error is 2 at 5% risk.

- A. 1000
- B. 400
- C. 200
- D. 100

30. Committing Type I error means

- A. The Hypothesis ( $H_0$ ) is true and our test accepts it
- B. The Hypothesis ( $H_0$ ) is false and our test accepts it
- C. The Hypothesis ( $H_0$ ) is false and our test rejects it
- D. The Hypothesis ( $H_0$ ) is true and our test rejects it

31. If the probability of being Rh-ve child after birth is  $1/10$ , than probability of being Rh+ve child will be

- A.  $5/10$
- B.  $9/10$

- C. 1/10
- D. 1

32. The Test to be applied to find the significance of difference in two or more than proportion

- A. Mann whitney U test
- B. student 't' test
- C. Chi square test
- D. ANNOVA

33. The extent to which a specific health care treatment, service, procedure, program, or other intervention does what it is intended to do when used in a community dwelling population is termed as

- A. Efficacy
- B. Effectiveness
- C. Effect modification
- D. Efficiency

34. Those who exercise regularly have higher levels of :

- A. LDL
- B. HDL
- C. Total Cholesterol
- D. Triglycerides

35. How is Maximum permissible Heart rate (MxPHR) calculated?

- A.  $(220 - \text{age in years})$
- B.  $(180 - \text{age in years})$
- C.  $(150 - \text{age in years})$
- D.  $(100 - \text{age in years})$

36. Early Diagnosis and Treatment of Angina is \_\_\_\_\_ mode of prevention for IHD:

- A. Primordial
- B. Primary
- C. Secondary
- D. Tertiary

37. The following Diet is a not a risk factor for Hypertension\*

- A. Rich in sodium salts
- B. High in potassium
- C. Rich in saturated fats
- D. Low in fibre

38. The most common cancer in Indian women is

- A. Breast
- B. Endometrium
- C. Oral cavity
- D. Cervix

39. Use of combined Oral Contraceptives accounts for an increase in risk of

- A. Endometrial Cancer  
 B. Ovarian cancer  
 C. Breast cancer  
 D. Oral cancer
40. Which of the following is a diagnostic criteria for COPD  
 A. FEV1 less than 80% of the predicted value  
 B. FEV1 less than 85% of the predicted value  
 C. FEV1 less than 90% of the predicted value  
 D. FEV1 less than 95% of the predicted value
41. Immunization against which particular disease is part of specific protection measures aimed at preventing Blindness  
 A. Chicken Pox  
 B. Measles  
 C. Mumps  
 D. Rubella
42. As per revised Jones criteria, the following are Major manifestations of Rheumatic fever except  
 A. Carditis  
 B. Polyarthrititis  
 C. Subcutaneous nodules  
 D. Fever
43. Spot maps come in handy while analyzing what aspect of data?  
 A. Temporal  
 B. Cyclical  
 C. Spatial  
 D. Secular
44. Which of the following is characteristic of Qualitative research?  
 A. Predict causal relationships  
 B. Describe individual experiences  
 C. Measure level of confidence  
 D. Are Objective
45. Exposure to Grocery Store A Among Cases and Controls, Legionellosis Outbreak — Louisiana, 1990. Calculate Odds ratio.
- |           | Cases | Controls |
|-----------|-------|----------|
| Exposed   | 25    | 28       |
| Unexposed | 2     | 26       |
- A. 11  
 B. 10  
 C. 13  
 D. 09
46. The quality of life can be evaluated by a composite index called "*physical quality of life index*" and it consolidates 3 indicators except:  
 A. Under - five mortality rate (U5MR)

- B. Infant mortality rate (IMR)
  - C. Life expectancy at the age of 1 year.
  - D. Literacy.
47. One of these is a food which comes under the category millet:
- A. Wheat
  - B. Maize
  - C. Jowar
  - D. Red Rice
48. Epidemiology mainly looks distribution of health states and disease conditions within populations in all the dimensions except:
- A. Time
  - B. Place
  - C. Person
  - D. Power
49. Propagated epidemics are all except:
- A. Point-source
  - B. Person to Person
  - C. Vector Borne
  - D. Reservoir related
50. Ethnic group is a group of persons who are \_\_\_\_\_ in respect of biologic inheritance and customs:
- A. Mixed
  - B. Homogeneous
  - C. Heterogeneous
  - D. Indigenous
51. Epidemiological studies include all except:
- A. Management studies
  - B. Descriptive Studies
  - C. Analytical Studies
  - D. Experimental Studies
52. Ecological studies look at associations which are related to:
- A. Group characteristics
  - B. Individual characteristics
  - C. Environmental characteristics
  - D. Economic characteristics
53. Feasible, \_\_\_\_\_, Novel, Ethical and Relevant (FINER) is the criteria of a good research question namely:
- A. Innovative
  - B. Interesting
  - C. Inquire-able
  - D. Intentional
54. The three measures of averages also called central tendencies in statistics are all except:



- A. Mean
  - B. Median
  - C. Mode
  - D. Metrics
55. Socio Economic Status categorization is measured as a variable on:
- A. Continuous scale of measurement
  - B. Nominal scale of measurement
  - C. Ordinal scale of measurement
  - D. Interval scale of measurement.
56. Demography is a study of:
- A. Democracy
  - B. Population
  - C. Environment
  - D. Ecology
57. Transcripts are the main sources of data in \_\_\_\_\_ research:
- A. Qualitative
  - B. Quantitative
  - C. Applied
  - D. Operational
58. The 3 most important principles of ethics are:
- A. Respect for personas
  - B. Justice
  - C. Equity
  - D. Beneficence and non-maleficence
59. BCC means:
- A. Beliefs Change Communication
  - B. Behavior Change Communication
  - C. Behavior Change Compassion
  - D. Behavior Compassion Competency
60. Interpersonal communication among patient-provider mainly requires all except:
- A. Caring attitude
  - B. Multi - Language skills
  - C. Problem solving skills
  - D. Counseling skills
61. The number of sustainable development goals are:
- A. 25
  - B. 27
  - C. 17
  - D. 15
62. The last National Health Policy in India was adopted in the year:
- A. 2015
  - B. 2010

- C. 2017  
D. 2014
63. The International Day of Yoga has been celebrated annually on \_\_\_\_\_ every year since 2015, following its inception in the United Nations General Assembly in 2014.  
A. 21 June  
B. 17 September  
C. 3 December  
D. 27 May
64. The following except one, are the components of Epidemiological triad  
A. Agent  
B. Environment  
C. Modes of transmission  
D. Host
65. In research ethics, the principle of 'Do no harm' is also known as  
A. Non-Beneficence  
B. Non-Maleficence  
C. Maleficence  
D. Autonomy
66. Following statement is not true about Japanese Encephalitis  
A. Pigs are considered as 'Amplifiers'  
B. Cattle and buffaloes are considered as 'amplifiers'  
C. Man is an incidental 'dead end host'  
D. Initial viral replication occurs in local and regional lymph nodes
67. Linoleic acid is found in  
A. Eggs  
B. Meat  
C. Soyabean oil  
D. Safflower oil
68. When vegetable oils are hydrogenated under conditions of optimum temperature and Pressure in the presence of a catalyst, the resulting Hydrogenated fat is known as  
A. Butter  
B. Cholesterol  
C. Arachidonic acid  
D. Vanaspathi
69. The WHO/FAO expert group on diet, nutrition and prevention of chronic diseases endorse that qualitative composition of fats in the diet has a significant role to play in modifying risk factors for  
A. Nephritis  
B. Rheumatoid Arthritis  
C. Cardiovascular Disease  
D. Glaucoma
70. The carbohydrate reserve (glycogen) of a human adult is about

- A. 1000 g
- B. 1500 g
- C. 500 g
- D. 2000 g

71. Prevention of obesity includes all except

- A. Physical exercise
- B. Dietary changes
- C. Appetite suppressing drugs
- D. Fasting

72. Which of the following has extremely high percentage of saturated fatty acids?

- A. Sunflower oil
- B. Canola oil
- C. Palm oil
- D. Corn oil

73. Ortho-tolidine test determines:

- A. Free Chlorine
- B. Combined Chlorine
- C. Both Free and Combined Chlorine
- D. Chlorine demand

74. All are indicators of air pollution except:

- A. Dust particles
- B. Smoke
- C. Carbon di oxide
- D. Sulphur di oxide

75. The largest constituent of human body is:

- A. Carbohydrates
- B. Proteins
- C. Fats
- D. Water

76. Summarizing raw data and displaying them on compact statistical tables for analysis is

- A. Tabulation
- B. Coding
- C. Transcription
- D. Editing

77. Strong correlation is signified by correlation coefficient of

- A. Zero
- B. One
- C. Less than one
- D. More than one

78. The best sampling method for sampling a population finite size:

- A. Area sampling

- B. Systematic Sampling
- C. Purposive Sampling
- D. Quota Sampling

79. Systematic selection of more number of exposed participants with the higher risk of outcome in a cohort study will result in

- A. Selection bias
- B. Information bias
- C. Confounding
- D. Random error

80. Which of the following is not a data-collection method?

- A. Research questions
- B. Unstructured interviewing
- C. Postal survey questionnaires
- D. Participant observation

81. Deduction and induction are two main forms of

- A. Beliefs
- B. Concepts
- C. Reasoning
- D. Assumptions

82. To be critical, thinking must be

- A. Practical
- B. Socially relevant
- C. Individually satisfying
- D. Analytical

83. A fallacy is a

- A. True argument
- B. False argument
- C. Valid argument
- D. Invalid argument

84. In a population of 10,000,000 people, at a given time 500 individuals have motor neurone disease. What is the point prevalence of motor neurone disease in this population at this given time?

- A. 0.05 per 100,000
- B. 0.5 per 100,000
- C. 5 per 100,000
- D. 50 per 100,000

85. According to Alma-Ata, elements of PHC are

- A. Eight
- B. Three

- C. Six
- D. Five

86. Lactose is made up of

- A. Glucose + Fructose
- B. Glucose + Glucose
- C. Glucose + Galactose
- D. Fructose + Fructose

87. Which part of eye can be transplanted?

- A. Retina
- B. Cornea
- C. Optic nerves
- D. Complete eye

88. Establishment of safe communities and parks is an example of:

- A. Biomedical intervention
- B. Behavioral intervention
- C. Structural intervention
- D. Political intervention

89. A vaccine that is biologically protective but not accepted by the public has:

- A. High efficacy and low effectiveness
- B. Low efficacy and high effectiveness
- C. High efficacy and high effectiveness
- D. Low efficacy and low effectiveness

90. A longitudinal or prospective study is also referred to as a

- A. Ecological
- B. Cross-sectional study
- C. Cohort study
- D. Observational study

91. This approach to health promotion aims to improve and promote health by addressing socioeconomic and environmental determinants of health within the community.

- A. behaviour change approach
- B. community development approach
- C. biomedical approach
- D. nature's approach

92. Snowball sampling is a non probability sampling technique in which \_\_\_\_\_.

- A. participants are chosen arbitrarily for their unique characteristics, experiences, or attitudes
- B. participants are chosen and then refer others with similar or different characteristics

- C. researchers select any readily available individuals as participants
- D. researchers systematically select participants from a sampling frame

93. In the definition of epidemiology, "distribution" refers to:

- I. Who
- II. When
- III. Where
- IV. Why
- A. I and II
- B. II and IV
- C. I,II,III
- D. I,II,III,IV

94. Comparing numbers and rates of illness in a community, rates are preferred for: (Choose one best answer)

- A. Conducting surveillance for communicable diseases
- B. Deciding how many doses of immune globulin are needed
- C. Estimating subgroups at highest risk
- D. Telling physicians which strain of influenza is most prevalent

95. Single blinding is practiced at the level of

- A. Investigator
- B. Participants
- C. Analysts
- D. None

96. Obtaining an accurate estimate of disease frequency and effect of exposure on health outcomes in study population pertains to

- A. External validity
- B. Internal validity
- C. Bias
- D. Confounding

97. Better recall of exposure among the cases in a case-control study can result in

- A. Information bias
- B. Confounding
- C. Investigator bias
- D. Selection bias

98. Which one of the following statement is true?

- A. Low cure rate can reduce the prevalence of a disease
- B. High case fatality can increase the prevalence of a disease
- C. Both 'a' and 'b' are true
- D. High cure rate and high case fatality can reduce the prevalence of a disease

99. Which one of the following study designs does not employ comparison groups to answer the primary study objective?

- A. Descriptive cross-sectional study
- B. Cohort study

- C. Ecological study
- D. Case-control study

100. Which of the following verbs is used in the statement of objectives of an analytical research study?

- A. Estimate
- B. Determine
- C. Study
- D. Describe