

4-97

Entrance Examinations – 2020
Ph.D. Health Sciences (Public Health)

Hall Ticket Number:

Time: 2 hours

Total Marks: 70 (Part I - 35 marks + Part II - 35 marks)

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ANSWERING.

INSTRUCTIONS

1. This booklet has **ELEVEN (11) 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 are **Two (2) PARTS** in the question paper – **PART I (Question numbers 1-35) and PART II (Question numbers 36 -70)**. In case of a tie, marks obtained in **PART I** will be considered for resolving the tie.
 4. Each question carries 1 mark and there is **no negative marking**.
 5. All answers have to be answered only in the OMR sheet following the instructions provided thereupon.
 6. Scientific calculators are not permitted.
-

PART I

- 1. Research in Health has its uses mostly in all these aspects except:**
 - A. Strengthening surveillance
 - B. Developing Rapid Diagnostics
 - C. Driving governance issues
 - D. Development of Vaccines and Medicines

- 2. The number of health researchers are _____ times more in high income than low income countries:**
 - A. 67
 - B. 43
 - C. 81
 - D. 33

- 3. John Snow's investigation of cholera is considered a model for epidemiologic field investigations because it included all except:**
 - A. Multivariate analysis
 - B. Spot map
 - C. Recommendation for action
 - D. Biological plausibility

- 4. The hallmark feature of an analytic epidemiologic study is:**
 - A. Use of an appropriate comparison group
 - B. Laboratory confirmation of the diagnosis
 - C. Publication in a peer-reviewed journal
 - D. Statistical analysis using logistic regression

- 5. Comparing numbers and rates of illness in a community, rates are preferred for:**
 - 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

- 6. Indirect transmission includes which all of the following except:**
 - A. Droplet spread
 - B. Mosquito-borne
 - C. Foodborne
 - D. Doorknobs or toilet seats

- 7. A case definition during an outbreak investigation should specify all except:**
 - A. Clinical features
 - B. Time
 - C. Place and Person
 - D. Hypothesized exposure

8. A spot map is useful for pinpointing all except:

- A. Geographic location of exposures
- B. Disease frequency
- C. Occupational sites
- D. Residence sites

9. Collection of information, its use and its transmission to other levels of health system by non-professional health workers is called:

- A. Survey
- B. Research
- C. Interview
- D. Lay reporting

10. A researcher has to represent the data regarding trends of malaria cases reported during 1975- 1985 throughout the world. Which of the following is applicable to represent his data?

- A. Bar graph
- B. Frequency polygon
- C. Pie chart
- D. Line graph

11. The population Census that will be carried out by the Government of India in 2021 is an example of:

- A. Exploratory Research
- B. Causal Research
- C. Descriptive Research
- D. None of the Above

12. The following are examples of Non-Probability Sampling except:

- A. Cluster Sampling
- B. Convenience Sampling
- C. Judgemental Sampling
- D. Accidental Sampling

13. Randomised Control Trial is a following type of study:

- A. Case-control NOT Cohort
- B. Cohort NOT Case-control
- C. Interventional OR Experimental
- D. Experimental ONLY

14. In absolutely no correlation the correlation coefficient ' r ' will be:

- A. $r = 1$
- B. $r = -1$
- C. $r = 0.5$
- D. $r = 0$

15. The temperature is usually measured in which scale:

- A. Ratio scale
- B. Nominal Scale
- C. Interval Scale
- D. Ordinal scale

16. Tuberculin test reaction of 10 boys is arranged in ascending order being measured in millimetres. Find the mean size of the reaction. 3,5,7,7,8,8,9,10,11,12.

- A. 7
- B. 8
- C. 9
- D. 10

17. Find standard Deviation of incubation period of small pox in 9 patients where it was found to be 14, 13, 11, 15, 10, 7, 9, 12 and 10.

- A. 3.12
- B. 1.93
- C. 2.54
- D. 3.86

18. "Find mean days of confinement after delivery in the following series":

Days of confinement	No. of Patients
6	5
7	4
8	4
9	3
10	2

- A. 8.2
- B. 8.6
- C. 7.2
- D. 7.6

19. Mean height of 500 students is 160 cm and the SD is 5 cm following normal distribution. What is the Relative Deviate score (Z), for the students who will have height above 168 cm?

- A. 1.6
- B. 1.9
- C. 2.3
- D. 2.6

20. Mean pulse rate of a population is believed to be 70 per minute with a standard deviation of 8. Calculate the minimum size of the sample to verify this, if allowable error $E = 1$ at 5% risk.

- A. 64
- B. 256
- C. 128
- D. 100

21. Incidence rate in the last influenza epidemic was found to be 50 per thousand (5%) of the population exposed. What should be the size of sample to find incidence rate in the current epidemic, if allowable error is 0.01?

- A. 100
- B. 950
- C. 1900
- D. 7600

22. When three children are born one after the other, the possibility of getting two female, one male babies is:

- A. 37.5
- B. 12.5
- C. 25
- D. 50

23. In a nutritional study, 100 children were given a usual diet and vitamins A and D tablets. After 6 months, their average weight was 30 kg with SD of 2 kg while the average weight of the second comparable group of 100 children who were taking the usual diet only was 29 kg with SD of 1.8 kg. Find the value of Z (Normal deviate) test?

- A. 9.4
- B. 1.4
- C. 0.8
- D. 3.7

24. When in a random sample of 100 children of a school, 25 had history of tonsillectomy and 60 of Whooping cough and 10 had both while 25 had neither whooping cough nor tonsillectomy. To find out the association between whooping cough and tonsillectomy, calculate the Chi square test value?

- A. 2.1
- B. 5.5
- C. 0.3
- D. 3.4

25. COVID 19 cases were reported throughout the world during the year 2019 – 2020. These cases can be best represented by:

- A. Line chart
- B. Histogram
- C. Pictogram
- D. Scatter diagram

26. Ten volunteers took a cholesterol lowering diet for 4 months and mean cholesterol levels were measured before and after the trial diet. The appropriate test of statistical significance for this trial will be:

- A. Chi-square test
- B. ANOVA
- C. Paired t test
- D. Unpaired t test

27. Lower cut-off of BMI for overweight as recommended for Asian populations is:
- A. >25
 - B. >18.5
 - C. >20.5
 - D. >23
28. Which measure is to be used while making comparisons using analytical techniques, between those who suffered, and those who did not suffer, though being a part of same source population, for testing the hypothesis in investigation of an epidemic?
- A. Attributable Risk Percent
 - B. Odds ratio
 - C. Relative risk
 - D. Population Attributable Risk
29. All of the Following are true regarding Focus Group Discussion except:
- A. 6 - 12 participants who are willing to talk
 - B. These participants should be as homogenous as possible with respect to their background characteristics
 - C. There is a recorder who notes down the proceedings and draws the socio-gram
 - D. Moderator leads the discussion
30. In general, screening should be undertaken for diseases with the following feature:
- A. Diseases with a low prevalence in identifiable subgroups of the population
 - B. Diseases for which case fatality rates are low
 - C. Diseases with a natural history that can be altered by medical intervention
 - D. Diseases that are readily diagnosed and for which treatment efficacy has been shown to be equivocal in evidence from a number of clinical trials
31. Hypothesis testing can be done by _____.
- A. Inferential statistics
 - B. Descriptive statistics
 - C. Data management
 - D. Data analysis
32. Uniting various qualitative methods with quantitative methods is known as
- A. Amalgamate
 - B. Triangulation
 - C. Unification
 - D. Intertwine
33. _____ refers to inferring about the whole population based on the observations made on a small part.
- A. Pseudo-inference
 - B. Objective inference
 - C. Inductive inference
 - D. Deductive inference

34. If you find that someone else publishes work similar to yours before your project is completed, what could you do?

- A. Acknowledge it in your report and evaluate the study
- B. Change your hypotheses and aims
- C. Completely revamp your ideas so you are not replicating their study
- D. There is nothing you can do so do not mention it in your study

35. Which one of these characteristics would you expect not to give high test-retest reliability?

- A. Attitudes
- B. Intelligence
- C. Attention
- D. Dyslexia

PART II

36. Empirically verifiable observation is known as _____

- A. Theory
- B. Value
- C. Fact
- D. Statement

37. The ethically reflective researcher will engage in-----

- A. Applying ethics in his/her research
- B. Focuses on achieving the expected outcomes at any cost
- C. Is particularly bound by rules and standards
- D. Spends a lot of time in thinking of the possibilities

38. Type - 1 Diabetes is not characterized by:

- A. Abrupt onset of severe symptoms
- B. It comprises up to 40% of all diabetes.
- C. Onset below 30 years
- D. Proneness to ketosis

39. "Match the following cancer with an infection":

- | | |
|----------------------------|-----------------------------------|
| 1. Cervix uteri | a. Schistosoma haematobium |
| 2. Lymphoid tissues | b. Helicobacter pylori |
| 3. Stomach | c. Epstein-Barr virus |
| 4. Urinary system | d. Human Papilloma virus |

- A. 1-d, 2-c, 3-b, 4-a
- B. 1-c, 2- a, 3-d, 4-b
- C. 1-b, 2-d, 3-a, 4-c
- D. 1-a, 2-b, 3-c, 4-d

40. All of the following are major symptoms of Schizophrenia except:

- A. Hallucinations
- B. Cognitive symptoms
- C. Obsessions
- D. Delusions

41. The gold standard for diagnosis and assessment of Chronic Obstructive Pulmonary Disease (COPD) is:

- A. Chest X ray
- B. Clinical Examination
- C. Spirometry
- D. MRI Chest

42. Age related hearing loss is known as:

- A. Presbycusis
- B. Presbyopia
- C. Otitis Media
- D. Meniere's disease

43. "One health" approach includes all except:

- A. Access to vaccines, devices and medicines
- B. Food safety
- C. Control of Zoonosis
- D. Combating antibiotic resistance

44. A _____ number of low- and middle-income countries face both extremes of malnutrition.

- A. 1 in 5
- B. 1 in 2
- C. 1 in 3
- D. 1 in 4

45. Globally _____ number of people (children + adults) are overweight.

- A. 3.1 billion
- B. 4.4 billion
- C. 0.6 billion
- D. 2.3 billion

46. Top most global cause of death in 2016 published in 2018-2019 is:

- A. Cancer
- B. Ischaemic Heart Disease
- C. Road Traffic Accidents
- D. Diarrheal Diseases

47. Health inequities are differences in health status or in the distribution of _____ between different population groups, arising from the social conditions in which people are born, grow, live, work and age.

- A. Health Resources
- B. Health Facilities
- C. Health Education
- D. Health Promotion

48. The Chief Scientist of World Health Organization is:

- A. Tedros Adhanom G
- B. Margaret Chan
- C. Chris Whitty
- D. Soumya Swaminathan

49. WHO code of ethics and professional conduct includes all except:

- A. Integrity
- B. Justice
- C. Respect
- D. Accountability

50. _____ was the leading cause of death among adolescents in 2016 globally as per the most recent report.

- A. Road Traffic Injuries
- B. Suicides
- C. HIV/AIDS
- D. Interpersonal violence

51. About what fraction of the people in the world have chronic diseases that are vector-borne?

- A. 33%
- B. 25%
- C. 75%
- D. 50%

52. Diseases that are due mostly to environmental changes, increased population densities, and pollution that result from modernization in third world nations are referred to as:

- A. Diseases of poverty
- B. Diseases of development
- C. Diseases of occupation
- D. Diseases of inequities

53. Which of the following statements is true?

- A. The curing practices of any medical system may be effective in relieving pain and curing minor illnesses.
- B. Folk medicines and curing practices have no curative powers and are based purely on superstition.
- C. Ill people rarely get well without the help of a medical doctor or folk curer.
- D. Superstitious practices does supplement folk medicine and medical systems

54. What is the job of an ethno-pharmacologist?

- A. To treat patients
- B. To discover new effective drugs
- C. To dispense drugs at their doorstep
- D. To dispense drugs only at the pharmacy

- 55. Public health surveillance includes which of the following activities except:**
- A. Soliciting case reports of persons with symptoms compatible with SARs from local hospitals
 - B. Creating graphs of the number of dog bites by week and neighbourhood
 - C. Diagnosing whether a case of encephalitis is actually due to Corona virus infection
 - D. Writing a report on trends in seat belt use to share with the state legislature
- 56. Using purgatives on a regular basis is harmful to health. Which deficiency does it cause?**
- A. Sodium
 - B. Zinc
 - C. Potassium
 - D. Iodine
- 57. This is true of Human Rights except:**
- A. Are guaranteed by international standards
 - B. Are legally protected
 - C. Protect individuals and groups
 - D. Can be waived or taken away
- 58. The "Right to Health" means:**
- A. The Right to be Healthy by all irrespective of any discrimination
 - B. Policies & plans to make available and accessible health care for all
 - C. The Right to Emergency health care services
 - D. Access to Expensive Health Services for poor
- 59. The correct Pathway to transition & dissemination in public health is:**
- A. Change, Discovery, Translation and Dissemination
 - B. Discovery, Dissemination, Change and Translation
 - C. Discovery, Change, Translation and Dissemination
 - D. Discovery, Translation, Dissemination and Change
- 60. Pick out the most appropriate statement related to Leprosy:**
- A. Also called as Koch's disease
 - B. Highly contagious, curable, can be transmitted vertically
 - C. Caused by mycobacterium, quick diagnosis by culture studies and curable
 - D. Also called as Hansen's disease
- 61. The optimal levels of Fluoride in drinking water is:**
- A. 0.5 to 1.3 ppm
 - B. 1- 10 ppm
 - C. >10 ppm
 - D. <0.5 ppm
- 62. Which condition is not an example of Anaphylaxis?**
- A. Bee Sting
 - B. Nuts
 - C. Fish
 - D. Asthma

63. Hidden Hunger refers to:

- A. When patient hides and ignores his hunger
- B. When the doctor misses the diagnosis of hunger
- C. When the micronutrients are missing in the diet
- D. When the patient is highly selective about the diet

64. Which is a mismatch in the following?

- A. Tuberculosis - Kochs
- B. Penicillin - Alexander Fleming
- C. Polio Vaccine - Jonas Salk
- D. Rabies - Edward Jenner

65. Biomedical Waste Management and Handling Rule came into force in:

- A. July 1984
- B. January 1985
- C. July 1998
- D. January 1995

66. Common methods of recycling rubber items used in hospital setting are all except:

- A. Autoclaving
- B. Microwaving
- C. Chemical Treatment
- D. Incineration

67. Toxic effects of inorganic lead exposure include all except:

- A. Colic
- B. Blue line on gums
- C. Mental confusion
- D. Stippling of RBC

68. Father of Occupational Medicine is:

- A. Bernardino Ramazzini
- B. Karl Marx
- C. Donald Hunter
- D. John Simon

69. Neurolathyrism is caused by regular intake of:

- A. Toor Dhal
- B. Channa Dhal
- C. Kesari Dhal
- D. Moong Dhal

70. With regard to congenital TORCH syndrome refers to:

- A. Toxoplasma, Onchocerciasis, Rubella, Cytomegalovirus, Herpes Simplex
- B. Toxoplasma, Other infections, Rubella, Cytomegalovirus, Herpes Simplex
- C. Toxoplasma, Rubella, Cytomegalovirus, Herpes Zoster
- D. Toxoplasma, Rubella, Chlamydia, Herpes Simplex

THE END