श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकीसंस्थान, तिरुवनंतपुरम्-11
SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY
THIRUVANANTHAPURAM—695 011

ENTRANCE EXAMINATION - ACADEMIC SESSION JANUARY 2018

PROGRAMME: Ph D HEALTH SCIENCES (PUBLIC HEALTH)

Time:90 Minutes

Max.Marks: 100

(Select the most appropriate answer)

(There are **no negative** marks for wrong answers)

Choose the letter (A, B, C or D) indicating the correct answer:

1. The pentavalent vaccine is a combination of
   A) Diphtheria, tetanus, whooping cough, BCG and polio vaccine
   B) Diphtheria, tetanus, measles, hepatitis B and Haemophilus influenza type b
   C) Mumps, rubella, measles, hepatitis B and Haemophilus influenza type b
   D) Diphtheria, tetanus, whooping cough, hepatitis B and Haemophilus influenza type b

2. The A in RMNCH+A strategy stands for health care of
   A) Anaemic mothers
   B) Adolescents
   C) AYUSH
   D) AIDS

3. The Kartar Singh committee report recommended the launch of
   A) Malaria eradication programme
   B) Urban health programme
   C) Re-orientation of medical education
   D) Multi-purpose worker scheme

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4. In a journal article. it is reported that they obtained an Odds Ratio of 2.5 with a P value of 0.023. Which among the following is the correct statement?

    A) The probability that the Odds Ratio is 2.5, is 0.023.

    B) The Odds Ratio is significantly different from 0, at 5% alpha level.

    C) The Odds Ratio is significantly different from 1, at 5% alpha level.

    D) The probability that the Null hypothesis is true is 0.023.

5. In a study, it is reported that the Pearson's correlation between 2 variables is 0.989 (P=0.031). Which among the following statements best describe the result?

    A) There is a weak negative correlation and is not statistically significant at 5% alpha level.

    B) There is a weak positive correlation and is statistically significant at 5% alpha level.

    C) There is a strong negative correlation and is not statistically significant at 5% alpha level.

    D) There is a strong positive correlation and is statistically significant at 5% alpha level.

6. The first case of a disease to be identified at the start of an epidemic is called

    A) Index case

    B) Primary case

    C) Presumptive case

    D) Point source

7. Incidence density is a

    A) Risk

    B) Rate

    C) Ratio

    D) Proportion

8. Setting the p level at 0.01 increases the chances of making a:

    A) Type I error

    B) Type II error

    C) Type III error

    D) None of the above

9. Two events are mutually exclusive if

A) They can occur together

B) They cannot occur together

C) They are exclusively connected

D) They exclusively include mutually

10. One way to measure the spread is to calculate the difference between the third and first quartile. This measure is called

A) Range

B) The differential quartile

C) The inter quartile range

D) 50th percentile

11. To evaluate the performance of a new test for Malaria, 100 known cases of malaria and 200 persons known not to have malaria were subjected to the test. Ninety malaria patients and 30 normal persons had a positive test. Specificity of the new test is

A) 90%

B) 85%

C) 70%

D) 50%

12. A recent change in the treatment strategy of the Revised National TB Control Programme is the shift from

A) Intermittent regimen to daily regimen

B) Daily regimen to intermittent regime

C) Domiciliary treatment to hospital admission

D) To hospital admission to domiciliary treatment

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13. What is the leading cause of death due to a single infectious agent in India?

A) Malaria

B) Tuberculosis

C) Dengue fever

D) HIV AID

14. Select the disease which is not transmitted by the *Aeides egypti* species of mosquitos?

A) Zika virus

B) Chikungunya

C) Dengue Fever

D) Japanese Encephalitis

15. Select the odd one.

A) Typhoid

B) Tuberculosis

C) Leprosy

D) Poliomyelitis

16. What is the most crucial component in setting up a database or repository of health conditions?

A) A working computer system

B) Adherence to uniform standards

C) Periodic evaluation at regular intervals

D) Committed staff

17. This disease was declared as eliminated from India in 2005. But the elimination is being questioned now. The disease is –

    A) Polio

    B) Guineaworm

    C) Leprosy

    D) Small pox

18. As per the norms of the Government, there should be one Primary Health Centre for every _____ population.

    A) 5000

    B) 30000

    C) 120000

    D) 500000

19. Which one of the following statements is true with regard to Japanese Encephalitis?

    A) An infected human acts as a source of infection

    B) An infected human will not act as a source of infection

    C) The Anopheles group of mosquitoes transmits Japanese Encephalitis

    D) There are no sub-clinical cases of Japanese Encephalitis

20. What is the most important aspect of any database?

    A) Variables

    B) Value labels

    C) Meta data

    D) Time frame

21. In a low-income country, which of the following is most characteristic of the healthcare system?

    A) A formalized social health insurance system

    B) A higher percentage of GDP spent on healthcare compared to high-income countries

    C) High coverage by private health insurance companies

    D) The poor generally face high out of pocket costs

22. Which one of the following is not a usual component in Health Technology Assessment?

    A) Systematic Reviews

    B) Economic evaluation

    C) Meta analysis

    D) Randomised Controlled Trials ... .

23. If the critical region is located equally in both sides of the sampling distribution of test-statistic, the test is called:

    A) One tailed

    B) Two tailed

    C) Right tailed

    D) Left tailed

24. Which of the following is non probability sampling?

    A) Simple random sampling

    B) Systematic sampling

    C) Snow ball sampling

    D) Stratified sampling

25. What is the dreaded complication of Zika virus infection?

    A) Primary infection is highly fatal

    B) Neurological complications in patients

    C) Affects foetus when pregnant women get it

    D) Causes severe pain

26. Needle exchange programme is an intervention for the control of

    A) HIV/AIDS

    B) Tuberculosis

    C) Tetanus

    D) Post-operative wound infections

27. "Gadchiroli model" is about

    A) Generic drug prescription
    B) Home based neonatal care
    C) Birth companion programme
    D) Stroke prevention

28. The notion where the use of resources and its replacement is in balance and the discharge of pollutants is minimized is called

    A) Bioethics

    B) Sustainable development

    C) Precautionary principle

    D) Secular ecology

29. Which one of the following satellite navigation systems belongs to India?

    A) GPS

    B) IRNSS

    C) GLONAS

    D) GALILEO

30. Which one of the following is not a trait?

    A) Intelligence

    B) Environment

    C) Personality

    D) Physical characteristics

31. "It is important not to criticize the employee in general terms. The goal is to evaluate job performance and not the person. A performance review that turns into a gripe session misses the opportunity to raise employee morale". The above is about,

    A) Lead with the positive

    B) Don't be confrontational.

    C) Positive reinforcement

    D) Exchange of views

32. Humans have --------- to define their shapes and Organisations have ------- to define their shape

    A) Culture , levels
    B) Life , culture
    C) Culture , behaviour
    D) Skeletons , structures

33. Decision making delegated to lower levels is one form of:

    A) Centralization

    B) Non-centralization

    C) Delegation

    D) Decentralization

34. Which of the following determinants of health is a 'downstream' determinant?

    A) Housing

    B) Age

    C) Education

    D) Employment Conditions

35. Over roughly the past 40 years there has been an evolution in approaches to defining health, led by groups such as the World Health Organization. Which one of the following best characterizes this evolution?

   A) From the objective to the subjective model

   B) From an illness to a sickness model

   C) Towards and increasingly holistic model

   D) From a biomedical to a wellness model

36. For a Poisson distribution, which among the following is always true?

   A) Mean=Median
   B) Mean=Standard deviation
   C) Mean=Variance
   D) Mean=Mode

37. The 'life course' perspective refers to:

   A) Considering the etiology of a health problem from its childhood origins

   B) All levels of prevention, including primordial

   C) Taking complete history

   D) Primordial prevention

38. Contingency theories stress

   A) importance of considering the traits
   B) importance of considering the behaviour
   C) importance of considering the context
   D) importance of considering the tasks

39. Factors of production are

   A) Land Labour Man Money

   B) Man Money Labour Manager

   C) Land Labour Capital Organisation

   D) Man Machine Money Material

40. Health expenditure by a government agency is considered:

A) Private expenditure on health

B) Public expenditure on health

C) For-profit expenditure on health

D) Out-of-pocket expenditure on health

41. Cost-effectiveness analysis of a health investment can be used for all of the following except:

A) To be the sole means for determining choices among investments

B) To set priorities among different ways of achieving the same health goal

C) To compare the costs and gains of different health interventions

D) To allocate health resources optimally

42. A study reports that from published data, it can be seen that in countries with reported high levels of consumption of alcohol, rates of road traffic accident are also high. What would you call the design of this study?

A) Policy study

B) Qualitative study

C) Ecological study

D) Retrospective study

43. To increase the 'yield' in screening, one way is to do parallel screening. Parallel screening refers to:

A) Screening the same people using different screening tests on each of them

B) Screening the same people with the same screening test repeatedly

C) Screening the same people with different tests on different people

D) Screening different groups with the same screening test

44. Gross Domestic Product is defined as:

A) The market value of all final goods and services produced within a country over a period of time.

B) The market value of all goods and services produced within a country over a period of time

C) The market value of all intermediate goods and services produced within a country over a period of time

D) The market value of all final goods and services produced within a country

45. State X has 11% of its population living below the poverty line, while state Y has 37% of its people living below the poverty line. However, State X more poor people than State Y. This means that

A) There are more unemployed people in State X

B) The cost of living is higher in State X

C) The population is larger in State X

D) State Y has a low GDP

46. A value of 1 in Gini index represents

A. Low inequality

B. Maximum inequality

C. 10% inequality

D. 1% inequality.

47. Differential access to health care as a result of socio-economic status and ethnicity is:

A) No longer true

B) Only found in low and middle income countries

C) An almost universal finding

D) Only found in high income countries

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48. For a standard normal distribution, the Median is _____.

A) A)1

B) B)-1

C) C)0

D) D)Infinity

49. For a variable that follows a normal distribution, approximately _____ % of the data values will be within (Mean ± 2 Standard deviations).

A) A)5%

B) 32%

C) 68%

D) 95%

50. To assess whether the difference between 2 means is statistically significant or not, which of the following is most appropriate?

A) Chi-square test

B) T-test

C) Levene's test

D) Wald test

51. The written and unwritten rules that specify appropriate group behaviour are called:

A) Shared attitudes

B) Shared beliefs

C) Shared values

D) Norms

52. The process of taking an interview schedule to a small sub group of the population in which it is going to be used to test the utility of the questions being used is called:

A) Sampling the interview schedule

B) Pre-testing the interview schedule

C) Enumerating the interview schedule

D) Validating the interview schedule

53. Which of the following is the most appropriate to assess the strength of association/correlation between 2 ordinal variables?

A) Spearman's correlation

B) Pearson's correlation

C) Kappa statistics

D) Contingency coefficient

54. Coefficient of determination (R-square) is obtained based on which of the following methods?

A) Poisson regression

B) Linear regression

C) Factor analysis

D) Mann-Whitney test

55. A method of using samples to estimate population parameters is known as

A) Statisical inference

B) Statistical significance

C) Statistical interference

D) Statistical appliance

56. GRAS substances are those added to food that are

A) Generally responsible for acute sickness

B) Geographically researched and accepted substances

C) Generic ally recognized and accepted substances

D) Generally recognized as safe

57. One of the preoccupations of quantitative researchers is with generalization, which is a sign of:

    A) External Validity

    B) Internal Validity

    C) Internal Reliability

    D) External Reliability

58. A research paper is a brief report of research work based on

    A) Primary Data only

    B) Secondary Data only

    C) Both primary and secondary Data

    D) None of the above

59. Questionnaire is a:

    A) Research method

    B) Measurement technique

    C) Tool for data collection

    D) Data analysis technique

60. A rate of 30 per 100 person months can also be expressed as _____ per 100 person years

    A) 2.5

    B) 3.6

    C) 25

    D) 360

61. What is the first stage of a systematic review?

A) Assess the relevance of each study to the research question(s)

B) Appraise the quality of studies from the previous step

C) Survey all of the literature contained within a single library

D) Define the purpose and scope of the review

62. Which one of the given vaccines gives protection against one or more types of cancers?

A) Hepatitis B vaccine (HBV)

B) Rota Virus Vaccine

C) Measles Vaccine

D) Polio Vaccine

63. Which among the following is a Nominal Variable?

A) Height in metres

B) Blood group

C) Letter grade obtained in an Examination

D) Time in seconds

64. Which among the following can be a probability value?

A) 1.563

B) -1.563

C) 0.563

D) -0.563

65. The type of qualitative research that describes the culture of a group of people is called:

A) Phenomenology

B) Ethnography

C) Grounded theory

D) Case study

66. What is the term used to describe the accumulation of dangerously high levels of toxins inside cells?

A) Biomagnification

B) Toxication

C) Persistent organic pollutant

D) Bioaccumulation

67. An investigator starts with a hypothesis that exposure to sunlight can lead to skin cancer. He assembles people with skin cancer attending a hospital OP, and a comparable group of people attending the same hospital for lung disease. He attempts to measure the sunlight exposure in both groups using a questionnaire. What would you call this design?

A) Prospective study

B) Cross sectional study

C) Retrospective study

D) Case-control study

68. What percentage of total world production of carbon dioxide do the developed countries contribute?

A) less than 1%

B) almost 90%

C) about 75%

D) about 20%

69. Which of the following is not a major contributor to the greenhouse effect?

A) carbon dioxide

B) carbon monoxide

C) chlorofluorocarbons

D) methane gas

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70. Ozone depletion is caused by

A) Carbon dioxide.

B) Chlorofluorocarbons

C) Carbon monoxide

D) Methane

71. The landmark book written by Ms Rachel Carson in 1962 that is considered to be the beginning of the modern environmental movement

A) The world without us

B) An inconvenient truth

C) Silent spring

D) Our stolen future

72. When there is common land, air or water, some people will take advantage and degrade the land and the resources to their own advantage and at the expense of others. This is referred as

A) Tragedy of the commons

B) Ecological accession

C) Pioneer mentality

D) Environmental terrorism

73. Which of the following is not a primary pollutant?

A) Carbon monoxide

B) Lead

C) Ozone

D) Nitrogen dioxide

74. Landfills have historically been sources of all the following, except

A) Breeding ground for insects/rodents

B) Producer of propane gas

C) Pollution of ground water

D) Odour

75. Which of the following is not a source reduction activity?

A) Products package reuse

B) Reducing use through modifications in practice

C) Saving energy by using recycled materials

D) Package or product design to reduce material/toxicity

76. During a toxicological study, the highest level of exposure at which none of the test animals is affected is called the

A) LD50

B) Threshold level

C) Safe level

D) Optimum exposure

77. The split-half method is used as a test of:

A) Stability

B) Internal reliability

C) inter-observer consistency

D) External validity

78. The term 'reverse operationism' means that:

A) The measurements we devise can sometimes help to develop a theory

B) The theories we devise will often hinder our attempts to measure concepts

C) Techniques such as factor analysis have no place in social research

D) Driving instructors always make you practice the most difficult manoeuvre

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79. Quantitative research has been criticised because:

   A) The measurement process suggests a spurious and artificial sense of accuracy

   B) The reliance on instruments and procedures makes it high in ecological validity

   C) It underestimates the similarities between objects in the natural and social worlds

   D) All of the above

80. An operational definition is:

   A) An abstract, theoretical definition of a concept

   B) A definition of a concept in terms of specific, empirical measures

   C) One that bears no relation to the underlying concept

   D) One that refers to opera singers and their work

81. The standard error is a statistical measure of:

   A) The normal distribution of scores around the sample mean

   B) The extent to which a sample mean is likely to differ from the population mean

   C) The clustering of scores at each end of a survey scale

   D) The degree to which a sample has been accurately stratified

82. 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

83. It is helpful to use a multi-stage cluster sample when:

   A) The population is widely dispersed geographically

   B) You have limited time and money available for travelling

   C) You want to use a probability sample in order to generalise the results

   D) All of the above

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84. An outlier is:

A) A type of variable that cannot be quantified

B) A compulsive liar who is proud to be gay

C) A score that is left out of the analysis because of missing data

D) An extreme value at either end of a distribution

85. The primary data analysis approach in ethnography is:

A) Open, axial and selective coding

B) Holistic description and search for cultural themes

C) Cross-case analysis

D) Identifying essence of a phenomenon

86. The term used to describe suspending pre-conceptions and learned feelings about a phenomenon is called:

A) Axial coding

B) Design flexibility

C) Bracketing

D) ethnography

87. The final stage in data analysis in grounded theory is called:

A) Axial coding

B) Theoretical saturation

C) Constant comparison method

D) Selective coding

88. What term refers to the insider's perspective in qualitative research?

A) Cultural relativist perspective

B) Emic perspective

C) Etic perspective

D) Cultural holistic perspective

89. Which major characteristic of qualitative research refers to studying real world situations as the y unfold naturally?

A) Holistic inquiry

B) Naturalistic inquiry

C) Inductive inquiry

D) Dynamic inquiry

90. A researcher lives among a specific tribal group in order to understand the day to day transactions between members of the tribal group and the health system

A) Narrative approach

B) Ethnography

C) Phenomenology

D) Grounded theory

91. In which qualitative research approach is the primary goal to gain access to the individual's inner world's of experience?

A) Grounded theory

B) Case study

C) Phenomenology

D) ethnography

92. In a study on exposure to sunlight and skin cancer, the investigator is worried that age of the subject can be a confounding variable, in the relationship between sunlight and skin cancer. Do you agree?

A) No, because you cannot be exposed to sunlight in all ages

B) Yes, because age can be associated with skin cancer, and old people can have accumulated effects of exposure

C) No, because skin cancer rates are not high in the aged

D) Yes, because skin cancer rates are high in the aged

93. In epidemiology, a 'construct' is also called a_____

A) Question

B) Exposure

C) Confounder

D) Latent variable

94. Reliability is about _____, whereas validity is about accuracy

A) Precision

B) Significance

C) Probability

D) Importance

95. An investigator tries to trace people who lived near high tension electric wires twenty five years ago, in order to look for evidence of leukaemia in them. What is this design called?

A) Matched case control

B) Ecological

C) Cross sectional

D) Retrospective cohort

96. An odds ratio of 0.6 with 95% confidence interval of 0.58-0.62 suggests that the exposure is_____:

A. Not important

B. Protective against the disease

C. Causes the disease

D. Unstable

97. Leadership is

A) The willingness to influence a group toward the achievement of goals

B) The inability to influence a group toward the achievement of goals

C) The ability to influence a group toward the achievement of goals

D) The unwillingness to influence a group toward the achievement of goals

98. Which one of the following is leadership?

A) relies on control strategies

B) administers subsystems within organisations

C) exhibits supervisory behaviour

D) creates vision and leadership for organisation

99. If the data is based on which of the following sampling methods, design effect can be assumed to be 1.

A) Simple random sampling

B) Systematic random sampling

C) Cluster random sampling

D) Multi-stage random sampling

100. Parametric test, unlike the non-parametric tests, make certain assumptions about

A) Population size

B) The underlying distribution

C) The sample size

D) Hypothesis