ENTRANCE TEST FOR Ph.D. PROGRAMME, 2023

PHYSICAL EDUCATION

Time : Three Hours   Maximum : 100 Marks

Part A

Answer all questions.
Each question carries 1 mark.

1. Another name for a Likert Scale is a (n) :

   (a) Interview protocol.   (b) Event sampling.

   (c) Summated rating scale.   (d) Ranking.

2. Which of the following is not one of the six major methods of data collection that are used by educational researchers ?

   (a) Observation.   (b) Interviews.

   (c) Questionnaires.   (d) Checklists.

3. A census taker often collects data through which of the following ?

   (a) Standardized tests.   (b) Interviews.

   (c) Secondary data.   (d) Observations.

4. The researcher has secretly placed him or herself (as a member) in the group that is being studied. This researcher may be which of the following ?

   (a) A complete participant.

   (b) An observer-as-participant.

   (c) A participant-as-observer.

   (d) None of the above.

5. Which of the following is not a major method of data collection ?

   (a) Questionnaires.   (b) Focus groups.

   (c) Co relational method.   (d) Secondary data.

6. Which type of interview allows the questions to emerge from the immediate context or course of things ?

    (a) Interview guide approach.

    (b) Informal conversational interview.

    (c) Closed quantitative interview.

    (d) Standardized open-ended interview.

7. Sampling in qualitative research is similar to which type of sampling in quantitative research ?

    (a) Simple random sampling.   (b) Systematic sampling.

    (c) Quota sampling.   (d) Purposive sampling.

8. Which of the following would generally require the largest sample size ?

    (a) Cluster sampling.   (b) Simple random sampling.

    (c) Systematic sampling.   (d) Proportional stratified sampling.

9. People who are available, volunteer, or can be easily recruited are used in the sampling method called ——————————.

    (a) Simple random sampling.   (b) Cluster sampling.

    (c) Systematic sampling.   (d) Convenience sampling.

10. Which of the following would usually require the smallest sample size because of its efficiency ?

    (a) One stage cluster sampling.

    (b) Simple random sampling.

    (c) Two stage cluster sampling.

    (d) Quota sampling.

11. Which research paradigm is based on the pragmatic view of reality ?

    (a) Quantitative research.   (b) Qualitative research.

    (c) Mixed research.   (d) None of the above.

12. Which research paradigm is least concerned about generalizing its findings ?

    (a) Quantitative research.   (b) Qualitative research.

    (c) Mixed research.   (d) None of the above.

13. Which of the following best describes quantitative research ?

    (a) The collection of nonnumeric data.

    (b) An attempt to confirm the researcher's hypotheses.

    (c) Research that is exploratory.

    (d) Research that attempts to generate a new theory.

14. A condition or characteristic that can take on different values or categories is called ————.

    (a) A constant.   (b) A variable.

    (c) A cause-and-effect relationship.   (d) A descriptive relationship.

15. Which Vitamin plays a prominent role in blood clotting ?

    (a) Vitamin A.   (b) Vitamin D.

    (c) Vitamin E.   (d) Vitamin K.

16. The state of being first creates a strong almost unusable impression. This is :

    (a) Law of primacy.   (b) Law of intensity.

    (c) Law of recency.   (d) Law of effect.

17. That the things most recently learned are best remembered refers to :

    (a) Law of intensity.   (b) Law of effect.

    (c) Law of primacy.   (d) Law of recency.

18. Which is the lowest level of learning ?

    (a) Rate learning.   (b) Understanding.

    (c) Application.   (d) Correlation.

19. Emotional stability, anxiety, sadness and built ability are attributes of which personality dimension ?

    (a) Extroversion.   (b) Agreeableness.

    (c) Bourgeoisies.   (d) Openness.

20. Which of the following is not an attribute of agreeableness personality dimension ?

    (a) Altruism.   (b) Complexity.

    (c) Trust.   (d) Modesty.

21. The leader who allows complete freedom in decision making and do not participate in the group activities is :

    (a) Autocratic.   (b) Democratic.

    (c) Lassezfair.   (d) None of the above.

22. Stress is :

    (a) Advantageous to the player.

    (b) Detrimental to his abilities.

    (c) Both advantageous and detrimental as per the situation.

    (d) None of the above.

23. Maslow places needs at the bottom of hierarchy :

    (a) Esteem.   (b) Belongingness.

    (c) Safety.   (d) Physiological.

24. Which law of learning is also called the law of use and disuse ?

    (a) Law of exercise.   (b) Law of readiness.

    (c) Law of effect.   (d) Law of intimacy.

25. The law of effect is also known as :

    (a) Law of use and disuse.   (b) Law of satisfaction.

    (c) Law of recency.   (d) Law of frequency.

26. Which of the following are true ?

   i. Mature red blood cells do not contain a nucleus.

   ii. Red blood cells contain haemoglobin, which binds to oxygen.

   iii. Red blood cells transport oxygen to body cells and transport some carbon dioxide from body cells.

   iv. Hemocytoblasts give rise to all types of blood cells.

    (a) i, ii, and iii.   (b) ii and iii only.

    (c) ii, iii, and iv.   (d) i, ii, iii, and iv.

27. Where are red blood cells produced ?

    (a) Lymphatic vessels.   (b) Heart chambers.

    (c) Red bone marrow   (d) Yellow bone marrow.

28. All of the following types are white blood cells, except :

    (a) Neutrophils.   (b) Lymphocytes.

    (c) T cells.   (d) Platelets.

29. Neutrophils perform which of the following functions ?

    (a) Produce antibodies.   (b) Phagocytize bacteria.

    (c) Destroy infected body cells.   (d) Deliver carbon dioxide to the lungs.

30. Which of the following statements about neurotransmitters is false ?

    (a) Excitatory neurotransmitters may generate an action potential in the neuron they reach.

    (b) At a neuromuscular junction, acetylcholine has inhibitory effects.

    (c) Dopamine helps regulate muscle tone.

    (d) Norepinephrine is found in both the central and peripheral nervous systems.

31. A signal moves through the parts of a single neuron in what order ?

    (a) Dendrites, cell body, axon, axon terminals.

    (b) Axon terminals, axon, cell body, dendrites.

    (c) Cell body, dendrites, axon, axon terminals.

    (d) Axon, dendrites, axon terminals, cell body.

32. A myelinated axon transmits a signal ——————— a non-myelinated axon.

    (a) More slowly than.   (b) More quickly than.

    (c) At the same rate as.   (d) More accurately than.

33. When a neuron is not transmitting a signal, which of the following is true ?

    (a) The cell membrane is depolarized.

    (b) The cell contains an action potential.

    (c) The cell cannot be stimulated by neurotransmitters.

    (d) The net charge inside the cell is negative.

Turn over

34. Which type of cells phagocytize debris in the central nervous system ?

    (a) Ependymal cells.   (b) Astrocytes.

    (c) Microglia.   (d) Oligodendrocytes.

35. Which one of these statistics is unaffected by outliers ?

    (a) Mean.   (b) Inter quartile range.

    (c) Standard deviation.   (d) Range.

36. A list of 5 pulse rates is : 70, 64, 80, 74, 92. What is the median for this list ?

    (a) 74.   (b) 76.

    (c) 77.   (d) 80.

37. Which of the following would be most likely to produce selection bias in a survey ?

    (a) Using questions with biased wording.

    (b) Only receiving responses from half of the people in the sample.

    (c) Conducting interviews by telephone instead of in person.

    (d) Using a random sample of students at a university to estimate the proportion of people who think the legal drinking age should be lowered.

38. Which one of the following variables is not categorical ?

    (a) Age of a person.

    (b) Gender of a person: male or female.

    (c) Choice on a test item: true or false.

    (d) Marital status of a person (single, married, divorced, other).

39. Which one of these statistics is unaffected by outliers ?

    (a) Mean.   (b) Interquartile range.

    (c) Standard deviation.   (d) Range.

40. Which of the following would indicate that a dataset is not bell-shaped ?

    (a) The range is equal to 5 standard deviations.

    (b) The range is larger than the inter quartile range.

    (c) The mean is much smaller than the median.

    (d) There are no outliers.

Questions 42 and 43 : A newspaper article reported that "Children who routinely compete in vigorous after-school sports on smoggy days are three times more likely to get asthma than their non-athletic peers.

41. Of the following, which is the most important additional information that would be useful before making a decision about participation in school sports ?

    (a) Where was the study conducted ?

    (b) How many students in the study participated in after-school sports ?

    (c) What is the baseline risk for getting asthma ?

    (d) Who funded the study ?

42. The newspaper also reported that "The number of children in the study who contracted asthma was relatively small, 265 of 3,535." Which of the following is represented by $265/3535 = .075$?

    (a) The overall risk of getting asthma for the children in this study.

    (b) The baseline risk of getting asthma for the "non-athletic peers" in the study.

    (c) The risk of getting asthma for children in the study who participated in sports.

    (d) The relative risk of getting asthma for children who routinely participate in vigorous after-school sports on smoggy days and their non-athletic peers.

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    (c) Conducting interviews by telephone instead of in person.

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44. Which one of the following variables is not categorical ?

    (a) Age of a person.

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    (c) Choice on a test item : true or false.

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Turn over

45. To the different body parts oxygen is carried by :

    (a) Platelets.   (b) Haemoglobin.

    (c) WBC.   (d) Serum.

46. The point where the entire mass or weight of the body may be considered to be concentrated is :

    (a) Centre of mass.   (b) Centre of gravity.

    (c) Torque.   (d) Lever.

47. Which muscle is called boxers muscle ?

    (a) Deltoid.   (b) Biceps.

    (c) Serratus anterior.   (d) Pectoralis major.

48. Which of the following is an example for biaxial joint ?

    (a) Hinge.   (b) Pivot.

    (c) Both (a) and (b).   (d) None of the above.

49. Osgoods Semantic Differential scale is used to measure —————————.

    (a) Anxiety.   (b) Stress.

    (c) Aggression.   (d) Attitude.

50. Sprinting speed is best developed through —————————.

    (a) Interval training .   (b) Weight training.

    (c) Meditation.   (d) Circuit training.

(50 × 1 = 50 marks)

Part B

*Answer any **ten** questions.*
Each question carries 5 marks.

51. Delimitation.

52. Questionnaire.

53. Need of Research Design.

54. Interpretation.

55. Limitations of test of significance.

56. Carbohydrate loading.

57. Insulin.

58. Perception.

59. Null Hypothesis.

60. Anova.

61. Percentile.

62. Floating rib

63. Test for flexibility.

64. Control group.

(10 × 5 = 50 marks)