

Ph.D. ENTRANCE EXAMINATION, APRIL 2021**PHYSICAL EDUCATION**

Time : Three Hours

Maximum : 100 Marks

I. Fill in the blanks. Answer *all* the questions :

- 1 The deoxygenated blood reaches to the heart through _____.
- 2 A lateral deviation of spine is called _____.
- 3 _____ helps in the proper absorption and utilization of calcium and phosphorus in the body.
- 4 Glycogen is stored in _____ region of a muscle fibre.
- 5 When the force or tension in the muscle remains constant while the length of the muscle changes is called _____.
- 6 The normal curve is shaped as _____.
- 7 Hunch back is also called as _____.
- 8 A complex disease involving an excessive amount of body fat is _____.
- 9 _____ plane divides the body into the front and back
- 10 Goniometer is a device that measures.

(10 × 2 = 20 marks)

II. Write answers in *one* word :

- 1 The boundary set forth the research study is called ?
- 2 FIIT principle is related to what ?
- 3 What is a specific statement of prediction in research ?
- 4 How many medals won by India in 2021 Tokyo Olympics ?
- 5 A research approach where opinions are collected from a sample of subjects is called ?
- 6 Skill analysis in sports is done with which method ?
- 7 When two groups are compared which statistical technique will be used ?
- 8 Direct or first hand evidence about an event, object, person, or work is called ?

Turn over

- 9 What for the Cooper 12 minute run/walk test used ?
- 10 A process of extracting and discovering patterns in large data sets involving methods at the intersection of machine learning, statistics, and database systems is known as ?

(10 × 2 = 20 marks)

III. State True or False. Answer *all* the questions :

- 1 Factorial design is a type of research methodology that allows for the investigation of the main and interaction effects between two or more independent variables and on one or more outcome variable(s).
- 2 Test-retest is used for testing validity.
- 3 Cognitive domain includes synthesis and evaluation.
- 4 Chronological age refers to the growth and development of the skeletal system.
- 5 ATP is a secondary source of energy.

(5 × 2 = 10 marks)

IV. Write short notes on any *ten* questions :

- 1 What is periodization ? Explain.
- 2 What is SPSS ?
- 3 What is primary data in research ?
- 4 Case study is a research methodology that has commonly used in social sciences. Justify.
- 5 What is descriptive statistics ? Explain.
- 6 Research is quest for undiscovered truth or knowledge. Explain.
- 7 Anthropometry is an area of research in physical education and sports. Explain.
- 8 Differentiate between aerobic and anaerobic energy systems.
- 9 How to measure lung volume using spirometry ?
- 10 What is a literature review in research ? Explain.
- 11 What is Analysis of Variance ?
- 12 How to write a synopsis ?

- 13 What are the components of physical fitness ?
- 14 Explain socio economic status scale.
- 15 Briefly explain the methods of assessing strength and cardiovascular endurance.

(10 × 4 = 40 marks)

V. Answer any *one* question :

- 1 What are the methods of sampling from a population ? Explain.
- 2 How to write a sports feature article ? Explain.

(1 × 10 = 10 marks)

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