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Name:

Reg. No:

SECOND YEAR B.P.Ed. (INTEGRATED) DEGREE EXAMINATION, APRIL 2024

(Regular/Supplementary/Improvement)

CC15U BPE2 T7 / CC19U BPE2 T7 - PHYSIOLOGY AND PHYSIOLOGY OF EXERCISE

(2015 Admission onwards)

Time: Three Hours

Maximum: 75 Marks

Answer any *three* questions from **Part A**.

Any *one* question from **Part B**. Questions from **Part C** is compulsory

Part A

1. Describe in detail cardiovascular system (systemic & pulmonary circulation).

(1 × 15 = 15 Marks)

2. Explain the following:

a. Skeletal muscle fibre types.

b. External respiration.

c. Functions of Muscles.

(3 × 5 = 15 Marks)

3. (A) Match the following:

- | | | |
|---|----|--------------------|
| a. Techniques treating injuries | -- | Spirometer. |
| b. Range of motion at a joint | -- | Haemoglobin |
| c. Oxygen carrying capacity of blood | -- | Cell |
| d. Injuries involving ligament | -- | Intensity of work. |
| e. Structural unit of nervous system | -- | P.R.I.C.E.S. |
| f. Structural unit of muscle | -- | Sprains |
| g. Lactic acid accumulation | -- | Neuron. |
| h. Causes of rise temperature in muscle | -- | A.T.P. |
| i. Source of energy | -- | Flexibility |
| j. Vital Capacity | -- | Fatigue. |

(10 × 1 = 10 Marks)

(B) Fill in the blanks:

- The outer layer of the heart wall is _____
- The contractile elements of the muscle fibre are called _____
- Cardiac output is the amount of blood pumped by a ventricle in one _____
- Physical exercise done in the presence of oxygen is called _____
- A part of respiratory system responsible for speech is _____

(5 × 1 = 5 Marks)

4. Explain:
- a. Neuro Muscular Junction.
 - b. Factors Effecting Speed.
 - c. Carbohydrate Metabolism.

(3 × 5 = 15 Marks)

5. Explain:
- a. Physiology of warming up.
 - b. Effect of exercise on the Muscular system.
 - c. Oxygen debt.

(3 × 5 = 15 Marks)

Part B

6. a. Explain the mechanism of muscle contraction.
b. Briefly explain the mechanism of respiration.

(2 × 7 ½ = 15 Marks)

7. Describe briefly:
- a. Catabolism and Anabolism.
 - b. Functions of liver.
 - c. Describe, how temperature influence the metabolism?

(3 × 5 = 15 Marks)

Part C

8. Write short notes on any *five* of the following:
- (a) Stroke Volume.
 - (b) Pancreas.
 - (c) Ionic regulation.
 - (d) Oxygen debt.
 - (e) Blood pressure.
 - (f) Fatigue.
 - (g) Alveoli.
 - (h) Vital Capacity.

(5 × 3 = 15 Marks)
