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Brainware University  
398, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700125

## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – B.Physiotherapy-2022/B.Physiotherapy-2023/B.Physiotherapy-2024

Course Name – Human Physiology - I

Course Code - BPTC102

( Semester I )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Name the protein factories of cells
  - a) Peroxisomes
  - b) Ribosomes
  - c) Mitochondria
  - d) Centrosome
- (ii) Name the power plant of the cell
  - a) Golgi apparatus
  - b) Endoplasmic reticulum
  - c) Ribosomes
  - d) Mitochondria
- (iii) Identify the one which is not WBC.
  - a) granulocyte
  - b) monocyte
  - c) lymphocytes
  - d) none of these
- (iv) Identify the pigment in red blood cells that carries oxygen.
  - a) Erythropoietin
  - b) Haemoglobin
  - c) Melatonin
  - d) Urobilinogen
- (v) Identify the most abundant blood cells in humans
  - a) RBC
  - b) WBC
  - c) Platelets
  - d) Plasma
- (vi) Choose the one which is not a salivary gland
  - a) Parotid Gland
  - b) Maxillary Gland
  - c) Sublingual Gland
  - d) Sub Mandibular Gland
- (vii) Choose the tissue layer which is not a part of the alimentary canal
  - a) mucosa
  - b) secretin
  - c) muscularis
  - d) serosa
- (viii) Choose the organ which secretes Trypsin
  - a) Small Intestine
  - b) Liver
  - c) Pancreas
  - d) Gall Bladder
- (ix) Identify the macronutrients not broken in the digestive system .

- a) Protein  
c) Fiber
- b) Fat  
d) Carbohydrate
- (x) Name the gland produces insulin and glucagon hormones.
- a) Thyroid gland  
c) Pancreas
- b) Adrenal gland  
d) Pituitary gland
- (xi) Select the hormone responsible for the growth and development of body tissues is called:
- a) Prolactin  
c) Follicle-stimulating hormone (FSH)
- b) Growth hormone  
d) Luteinizing hormone (LH)
- (xii) Identify the primary function of the kidneys in the renal excretory system.
- a) Regulation of body temperature  
c) Production of digestive enzymes
- b) Filtration of blood and excretion of waste products  
d) Storage of urine in the bladder
- (xiii) Choose the correct option regarding this statement. The process of reabsorption in the nephron involves returning important substances, such as water and nutrients, back into:
- a) glomerulus  
c) collecting duct
- b) renal pelvis  
d) blood stream
- (xiv) Name the phase of the menstrual cycle in which ovulation usually occur.
- a) Menstrual phase  
c) Luteal phase
- b) Follicular phase  
d) Proliferative phase
- (xv) Select the correct location of Meissner's plexus -
- a) Submucosa layer of the GIT.  
c) Mucosa layer of the GIT.
- b) Muscularis externa layer of the GIT.  
d) Serosa layer of the GIT.

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain JGA (3)
3. State the major types of white blood cells and their respective functions (3)
4. Explain : hypothalamus acts as a thermostat for body temperature regulation. (3)
5. Explain ;The pituitary gland is called master gland. (3)
6. Deduce the role of kidneys in regulating the body's water and electrolyte balance. (3)

OR

Explain the process of urine formation in the kidneys. (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe the mode of action of steroid hormones (5)
8. Describe the structure and functions of a eukaryotic cell, highlighting the roles of different organelles in cellular activities. (5)
9. Correlate Inspiratory Reserve Volume (IRV) and Inspiratory Capacity (IC). (5)
10. Write about the abnormalities seen in WBC count. (5)
11. Compare the function of different chambers of the heart. (5)
12. Classify the hormones secreted from the adrenal cortex. (5)

OR

Illustrate the synthesis and function of Thyroid Stimulating Hormone. (5)

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