



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

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

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) Select the hormone that is responsible for regulating calcium levels in the blood.
- | | |
|-------------|------------------------------|
| a) Insulin | b) Thyroxine |
| c) Cortisol | d) Parathyroid hormone (PTH) |
- (ii) Identify the primary function of the kidneys in the renal excretory system.
- | | |
|------------------------------------|--|
| a) Regulation of body temperature | b) Filtration of blood and excretion of waste products |
| c) Production of digestive enzymes | d) Storage of urine in the bladder |
- (iii) State the component of protein which contributes to maximum percentage to total plasma protein
- | | |
|---------------|----------------|
| a) Albumin | b) Globulin |
| c) Fibrinogen | d) Prothrombin |
- (iv) State the most abundant blood cells in the human body
- | | |
|--------------|-----------------|
| a) WBCs | b) RBCs |
| c) Platelets | d) Plasma cells |
- (v) Identify the one which is not WBC.
- | | |
|----------------|------------------|
| a) granulocyte | b) monocyte |
| c) lymphocytes | d) none of these |
- (vi) Identify the pigment in red blood cells that carries oxygen.
- | | |
|-------------------|-----------------|
| a) Erythropoietin | b) Haemoglobin |
| c) Melatonin | d) Urobilinogen |
- (vii) Choose the one which is not a salivary gland
- | | |
|---------------------|-------------------------|
| a) Parotid Gland | b) Maxillary Gland |
| c) Sublingual Gland | d) Sub Mandibular Gland |
- (viii) Choose the tissue layer which is not a part of the alimentary canal
- | | |
|---------------|-------------|
| a) mucosa | b) secretin |
| c) muscularis | d) serosa |

- (ix) Identify the correct function of the esophagus in the digestive process.
 - a) Absorption of nutrients
 - b) Breaking down food with enzymes
 - c) Mixing food with stomach acid
 - d) Transporting food from the mouth to the stomach
- (x) Identify the layer of the GI tract is responsible for mechanical digestion and movement of food.
 - a) Mucosa
 - b) Submucosa
 - c) Muscularis externa
 - d) Serosa
- (xi) Name the enzyme responsible for breaking down carbohydrates in the mouth-
 - a) Lipase
 - b) Pepsin
 - c) Amylase
 - d) Trypsin
- (xii) Predict the most important site of absorption of nutrients in the digestive system
 - a) Stomach
 - b) Esophagus
 - c) Small intestine
 - d) large intestine
- (xiii) Indicate the purpose of mucus in the digestive system
 - a) Breaking down fats
 - b) Absorbing nutrients
 - c) Protecting the stomach linnings
 - d) Stimulating enzyme production
- (xiv) Indicate the purpose of bile in the digestive process.
 - a) Breaking down fats into smaller molecules
 - b) Neutralizing stomach acid
 - c) Breaking down carbohydrates
 - d) Increasing nutrient absorption in the colon
- (xv) Name the process called when oxygen and carbon dioxide are exchanged between the blood and body tissues at the cellular level.
 - a) External respiration
 - b) internal respiration
 - c) Cellular respiration
 - d) Pulmonary respiration

Group-B

(Short Answer Type Questions)

3 x 5=15

- 2. Discuss the role of platelets in the process of blood clotting (3)
 - 3. State the major types of white blood cells and their respective functions (3)
 - 4. Differentiate between arteries and veins in the cardiovascular system (3)
 - 5. Compare and contrast hormonal and barrier methods of contraception (3)
 - 6. Differentiate between Vital capacity and Timed vital capacity (3)
- OR**
- Differentiate between Pump and Bucket handle movement of breathing (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

- 7. Describe the mode of action of steroid hormones (5)
 - 8. Illustrate the role of Hypothalomo hypophyseal target endocrine axis. (5)
 - 9. Describe the mechanism of Active Transport through cell membrane. (5)
 - 10. Summarize the menstrual cycle. (5)
 - 11. Discuss the meachanism of blood coagulation (5)
 - 12. Illustrate pulmonary function tests. (5)
- OR**
- Explain cyanosis and dyspnea. (5)
