



BRAINWARE UNIVERSITY

Term End Examination 2022

Programme – B.Sc.(OTT)-2021/B.Sc.(CCT)-2021/B.Sc.(CCT)-2022/B.Sc.(OTT)-2022

Course Name – Human Physiology

Course Code - BOTT102/BCCT102/BCCTC102/BOTTC102

(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) Deduce which of the following cells produces HCl?
- | | |
|----------------|------------------|
| a) Beta cells | b) Oxyntic cells |
| c) Chief cells | d) Alpha cells |
- (ii) Identify the correct statement:
- | | |
|--|---|
| a) A person with O +ve blood group can receive blood from any person | b) A person with O -ve blood group can donate blood to any person |
| c) A person with AB blood group can donate blood to persons with both A or B blood group | d) A person with A -ve blood group can only receive blood of AB group |
- (iii) Explain lipolysis?
- | | |
|----------------------------------|-------------------------------|
| a) Hydrolysis of triacylglycerol | b) Formation of lipids |
| c) Breakdown of ketone bodies | d) Formation of ketone bodies |
- (iv) Choose the correct option: carbon dioxide is transported in the blood maximally as-
- | | |
|---------------------------|----------------------------|
| a) carbonates | b) bicarbonates |
| c) dissolved in the blood | d) attached to haemoglobin |
- (v) Choose the part of the brain which is involved in the regulation of respiration
- | | |
|----------------------|---------------|
| a) Hypothalamus | b) Thalamus |
| c) Medulla oblongata | d) Cerebellum |
- (vi) Write what dead space is.
- | | |
|--|--|
| a) It is the part of respiratory passage whose air takes part in gaseous exchange | b) It is the part of air that remain inside a dead man's lung |
| c) It is the part of respiratory passage whose air does not takes part in pulmonary gaseous exchange | d) It is the volume of air that can be breathe normally during respiration |
- (vii) Choose the correct option: The substance that cannot pass through semipermeable walls of glomerulus is called-
- | | |
|----------------|---------------------|
| a) Globulin | b) Albumin |
| c) Blood cells | d) All of the above |

- (viii) Predict the consequence if the diameter of the afferent arteriole becomes less than efferent arteriole-
- a) It will dilute urine
 - b) It will concentrate urine
 - c) No ultrafiltration will happen
 - d) Black urine will be formed
- (ix) Tell the name the scientist who gave the term Cell
- a) Robert Hooke
 - b) Tatum
 - c) Schwaan
 - d) De Bary
- (x) Select the stem cells forming trophoblast layer
- a) Totipotent
 - b) Multipotent
 - c) Pluripotent
 - d) Unipotent
- (xi) Label the term used by Seddon for first degree nerve injury
- a) Neurotmosis
 - b) Neuropraxia
 - c) Axonotmosis
 - d) None of these
- (xii) Match the options. In CNS myelinated fibers form the _____ while non myelinated fibers cells form_____.
- a) Grey matter, white matter
 - b) Ependymal cells, neurosecretory cells
 - c) White matter, grey matter
 - d) Neurosecretory cells, Ependymal cells
- (xiii) Select the right option: bleeding time is increased by:
- a) decreased levels of clotting factors
 - b) increased level of clotting factors
 - c) increased number of platelets
 - d) decreased number of RBCs
- (xiv) Tell Permeability of which of the following increases during depolarization?
- a) Na+
 - b) K+
 - c) Mg+
 - d) Ag+
- (xv) Give example of a nutritional deficiency anemia
- a) Aplastic anemia
 - b) Sickle cell anemia
 - c) Iron deficiency anemia
 - d) Inflammatory anemia

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Give examples (any three) of blood coagulation disorders. (3)
3. Illustrate oxygen dissociation curve with special reference to its shift towards right. (3)
4. Explain how pacemaker potential helps in the contraction of cardiac muscles. (3)
5. Generalize the structure of eye. (3)
6. Deduce the major salivary glands & the ducts connected to it. (3)

OR

Deduce the functions of pancreatic secretion in digestion. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Distinguish between the role of insulin and glucagon in the regulation of glucose homeostasis. (5)
8. Tabulate the stages of Nerve degeneration. (5)
9. Connect the various parts of GI Tract in digestion of carbohydrate. (5)
10. Infer the role of various parts of small intestine in digestion and absorption of food. (5)
11. Discuss about any 5 factors that may affect erythropoiesis. (5)
12. Illustrate how respiration is chemically regulated. (5)

OR

Write the role of different muscles in respiration. (5)
