



BRAINWARE UNIVERSITY

Term End Examination 2022

Programme – B.Optomety-2019/B.Optomety-2020/B.Sc.(PA)-2020/B.Optomety-2021/B.Sc.(PA)-2021

Course Name – Human Physiology

Course Code - BOPTO102/BPA102

(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) Identify the perichondrium
 - a) Yellow elastic connective tissue
 - b) Loose areolar connective tissue
 - c) Reticular connective tissue
 - d) Irregular white fibrous connective tissue
- (ii) Explain articular surface of joints
 - a) Is formed of hyaline cartilage
 - b) Is rich in elastic fibers
 - c) Is rich in collagen type I
 - d) Gets its nutrition from periosteum
- (iii) Explain characteristic of Multilocular fat cells
 - a) They have signet ring appearance
 - b) Affected by starvation
 - c) They are heat insulator
 - d) Abundant mitochondria
- (iv) Vital stain is used to detect the following cell, choose
 - a) Plasma cell
 - b) Reticular cell
 - c) Macrophage cell
 - d) Mast cells
- (v) State the connective tissue that connects muscle to bone is called
 - a) Ligament
 - b) Tendon
 - c) Nervous tissue
 - d) All of the above
- (vi) Select Cartilage and bone are types of
 - a) Muscular tissue
 - b) Connective tissue
 - c) Meristematic tissue
 - d) Epithelial tissue
- (vii) State Haversian canals occur in
 - a) Pubis
 - b) Clavicle
 - c) Scapula
 - d) Humerus
- (viii) Choose the term _____ refers to production of blood cells in the _____ of adults
 - a) Hemolysis; spleen
 - b) Hemostasis; liver
 - c) Homeostasis; bone marrow
 - d) Hematopoiesis; bone marrow
- (ix) State during platelet plug formation _____ and _____ are released, causing more platelets to stick to the platelet plug.

- a) Prostacyclin; nitric oxide
 c) ADP; thromboxane
- b) Heparin; plasmin
 d) GTP ; nitric oxide
- (x) State serum
- a) Whole blood sample from which all cells are removed.
 c) The portion of the blood that is composed of red blood cells.
- b) Plasma from which fibrinogen and clotting factors are removed.
 d) Plasma from which only albumin and globulins are removed.
- (xi) Identify the percentage of water in plasma is about
- a) 80-82%
 c) 50-52%
- b) 90-92%
 d) 60-62%
- (xii) Choose the rarest blood group
- a) AB negative
 c) O negative
- b) AB positive
 d) O positive
- (xiii) State which leucocytes release heparin and histamine in blood?
- a) Neutrophil
 c) Eosinophil
- b) Basophil
 d) Monocytes
- (xiv) Describe the Portal system is present between
- a) Two veins
 c) Vein and artery
- b) Two arteries
 d) Two capillary plexus
- (xv) Choose which is called secondary pacemaker of Heart?
- a) SA node
 c) Purkinje fiber
- b) AV node
 d) Bundle of His

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define Plasmodesmata and its function (3)
 3. Identify the role of FSH and LH in Ovulation. (3)
 4. Develop the concept on Hypoxia? Mention the types. (3)
 5. Develop an idea about Lung function test (3)
 6. Distinguish Asthma and COPD. (3)

OR

Differentiate between Type I and II Diabetes Mellitus (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe the EM structure of mitochondria with diagram. (5)
 8. Discuss the process of Protein digestion in elementary canal. (5)
 9. State how Hypothalamus regulates the secretion of Thyroid gland (5)
 10. Discuss the important changes take place in Ovary and Uterus during menstrual cycle. (5)
 11. Discuss how O₂ gas transports from lungs to tissue in our body with suitable diagram. (5)
 12. Describe the basic structural properties of systemic circulation. (5)

OR

Differentiate between spermatogenesis and oogenesis. (5)
