



BRAINWARE UNIVERSITY

Term End Examination 2022

Programme – B.Sc.(MRIT)-2022

Course Name – Human Anatomy & Physiology Part I

Course Code - BMRITC101

(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 structure that prevent the food to enter trachea
- | | |
|---------------|--------------|
| a) Epiglottis | b) Esophagus |
| c) Pharynx | d) Larynx |
- (ii) Write an example of a nutritional deficiency anemia
- | | |
|---------------------------|------------------------|
| a) Aplastic anemia | b) Sickle cell anemia |
| c) Iron deficiency anemia | d) Inflammatory anemia |
- (iii) Select the type of blood cell which is involved in our immunity:
- | | |
|-------------------|------------|
| a) Hepatocytes | b) WBCs |
| c) Purkinje cells | d) G cells |
- (iv) Select the normal level of haemoglobin in females
- | | |
|---------------|---------------|
| a) 11-14 g/dL | b) 9-11 g//dL |
| c) 14-18 g/dL | d) 10-18 g/dL |
- (v) Speculate the name of the iron-containing protein that is responsible for red colouration of blood
- | | |
|---------------|----------------|
| a) Hemocyanin | b) Hemosiderin |
| c) Hemoglobin | d) Myoglobin |
- (vi) Select the name of the cell responsible for Phagocytosis
- | | |
|----------------|----------------|
| a) Mast cell | b) Plasma cell |
| c) Macrophages | d) Fat cell |
- (vii) State which of the following is a Sesamoid bone
- | | |
|-------------|-------------------|
| a) Patella | b) 2nd Metacarpal |
| c) Scaphoid | d) Triquetral |
- (viii) Tell the name of nerve that supplies the Intrafusal fiber of skeletal muscle
- | | |
|--------------------------|--------------------------|
| a) type I sensory neuron | b) type 2 sensory neuron |
| c) gamma motor neuron | d) All of these |
- (ix) Select how many segments of duodenum are there
- | | |
|------|------|
| a) 1 | b) 3 |
| c) 4 | d) 5 |

- (x) Identify the correct option: Pericardial fluid is located in between
 - a) Endocardium & Myocardium
 - b) Myocardium and Pericardium
 - c) Pericardial and visceral layer of pericardium
 - d) All of these
- (xi) Select where the Islets of Langerhans are present
 - a) Body of pancreas
 - b) Head of pancreas
 - c) Inter-alveolar cells of pancreatic duct
 - d) Cystic duct
- (xii) Predict the correct option. The cardiac pacemaker is
 - a) S A node
 - b) Bundle of His
 - c) A V Node
 - d) All of these
- (xiii) Identify the name of the covering of the heart:
 - a) Meninges
 - b) Pleura
 - c) Peritoneum
 - d) Pericardium
- (xiv) Choose from the following options where gaseous exchange takes place:
 - a) Pharynx
 - b) Larynx
 - c) Alveoli
 - d) Trachea
- (xv) Identify the part of the brain that regulates the respiratory process
 - a) The vagus nerve
 - b) Cerebral peduncle
 - c) Medulla oblongata
 - d) Cerebellum

Group-B

(Short Answer Type Questions)

3 x 5=15

- 2. Explain the difference between expiratory reserve volume and inspiratory reserve volume. (3)
- 3. Classify the parts of liver and the functions of liver. (3)
- 4. Write about the ABO blood grouping system in human. (3)
- 5. Explain how pacemaker potential helps in the contraction of cardiac muscles. (3)
- 6. Define the type of voluntary muscle (according to the color, direction of the muscle fibers) (3)

OR

- Name the rotator cuff muscles of shoulder. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

- 7. State the parts of long bone and its microscopic anatomy in brief. (5)
- 8. Explain the phases in the cardiac cycle. (5)
- 9. Illustrate how respiration is chemically regulated. (5)
- 10. Illustrate the structure of spleen and its functions. (5)
- 11. Categorize the salivary glands, composition of saliva and its functions. (5)
- 12. Summarize the problems that may arise from blood transfusion. (5)

OR

- Evaluate any 5 factors that may affect erythropoiesis. (5)
