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**BRAINWARE UNIVERSITY**

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Term End Examination 2025-2026**Programme – B.Sc.(MRIT)-2022/B.Sc.(MRIT)-2023/B.Sc.(MRIT)-2024/B.Sc.
(MRIT)-2025****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 location where the pericardial fluid is located.
a) Endocardium & Myocardium b) Myocardium and Pericardium
c) Pericardial and visceral layer of pericardium d) All of these
- (ii) Select the correct option: the atrio-ventricular septum is made of
a) Cartilage b) Fibrous tissue
c) Osteocytes d) Mucous membrane
- (iii) Choose from the following options where gaseous exchange takes place.
a) Pharynx b) Larynx
c) Alveoli d) Trachea
- (iv) Predict the chronic respiratory disorder caused by smoking
a) Asthma b) Emphysema
c) Respiratory alkalosis d) Respiratory acidosis
- (v) Write the name of a primary respiratory muscle
a) Gastrocnemius muscle b) Intercostal muscle
c) Lung muscles d) Rectus abdominus
- (vi) Identify the instrument which can be used to hear heart sound
a) Acousticmeter b) Sphygmomanometer
c) Barometer d) Stethoscope
- (vii) Write the correct option: ventricular muscles accept cardiac impulse directly from
a) AV node b) Bundle of His
c) Right and left bundle branches d) Purkinje system
- (viii) State which of the following is a sesamoid bone
a) Patella b) 2nd Metacarpal
c) Scaphoid d) Triquetral

- (ix) Tell the type of the joint synchondroses
- a) Cartilaginous joint
 - b) Acartilaginous joint
 - c) Synovial joint
 - d) None of these
- (x) Tell the composition of intervertebral disc
- a) elastic cartilage
 - b) fibrous cartilage
 - c) calcified cartilage
 - d) hyaline cartilage
- (xi) Select the false rib:
- a) 2nd rib
 - b) 7th rib
 - c) 4th rib
 - d) 10th rib
- (xii) Describe the name of the plane which passes vertically along midline and divides body into right and left half.
- a) Sagittal
 - b) Frontal
 - c) Transverse
 - d) Transpyloric
- (xiii) 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
- (xiv) Choose which one is the best definition for Serum
- a) Whole blood sample from which all cells are removed.
 - b) Plasma from which fibrinogen and clotting factors are removed.
 - c) The portion of the blood that is composed of red blood cells.
 - d) Plasma from which only albumin and globulins are removed.
- (xv) Describe the Portal system is present between-
- a) Two veins
 - b) Two arteries
 - c) Vein and artery
 - d) Two capillary plexus

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Classify the composition of blood. (3)
3. Give examples (any three) of blood coagulation disorders. (3)
4. Summarize the surface features of the lung mentioning the fissure and lobes. (3)
5. Write about the structure of long bone with proper diagram. (3)
6. Describe every type of connective tissues in brief. (3)

OR

Write the difference between blood and lymph. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe the process of blood coagulation. (5)
8. Explain the structure and functions of the cell membrane, emphasizing its role in maintaining cell homeostasis. (5)
9. Explain the phases in the cardiac cycle. (5)
10. Establish the role of pleural, alveolar and transpulmonary pressure in respiration. (5)
11. Explain the role of different muscles in respiration. (5)
12. Summarize the problems that may arise from blood transfusion. (5)

OR

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