



## 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 Anatomy

Course Code - BOPTO101/BPA101

( 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) Collect from the following is one of the parts of the hind brain?
  - a) Hypothalamus
  - b) Cerebellum.
  - c) Corpus callosum
  - d) Spinal cord
- (ii) Collect from the following parts of the brain who controls the body temperature and urge of eating?
  - a) Thalamus
  - b) Cerebellum
  - c) Pons
  - d) Hypothalamus
- (iii) Control of temperature, endocrine activity, metabolism, and thirst are functions associated with the- collect from the following.
  - a) Medulla oblongata
  - b) Cerebellum
  - c) Hypothalamus
  - d) Cerebrum
- (iv) Select the correct option: The endothelium is found in the \_\_\_\_\_.
  - a) tunica intima
  - b) tunica media
  - c) tunica externa
  - d) lumen
- (v) In the blood vessels, smooth muscle fibers are present in the layer called:
  - a) Tunica externa
  - b) Endothelial cell layer
  - c) Tunica intima
  - d) Tunica media
- (vi) Adduction describes which of the following?
  - a) It moves the structure toward the body's midline reference point
  - b) It moves the structure in a circular motion
  - c) It moves the structure in a circular motion
  - d) It rotates the structure around its long axis
- (vii) Which statement describes flexion?
  - a) Movement that increases the angle between two structures or joints, causing the structures to straighten or move apart
  - b) Movement that decreases the angle between two structures or joints, causing the structures to bend or move closer together
  - c) Flexing a muscle
  - d) Relaxing a muscle

- (viii) Locate a plane that separates the body or structure into upper and lower parts?
- a) Sagittal plane  
b) Transverse plane  
c) Oblique plane  
d) Frontal plane
- (ix) Find error:
- a) Extensibility is a property of muscle.  
b) Excitability is a property of muscle.  
c) Degradability is a property of muscle.  
d) Elasticity is a property of muscle.
- (x) Find error in the options regarding the characteristics of cardiac muscles.
- a) They work continuously  
b) They are branched  
c) They are not striated  
d) They are involuntary
- (xi) Write the name of the ion which is essential for muscular contraction.
- a) Cl-  
b) Ca<sup>2+</sup>  
c) K+  
d) Na+
- (xii) Select the correct joints from the following is an example of a hinge joint?
- a) Between humerus and pectoral girdle  
b) Between knee joints  
c) Between carpals  
d) Between carpals and metacarpals
- (xiii) Select how many bones are there in human spinal column.
- a) 33  
b) 32  
c) 31  
d) 30
- (xiv) Write the name of the protein which blocks the myosin-binding site on actin in the relaxed muscle.
- a) titin  
b) troponin  
c) myoglobin  
d) tropomyosin
- (xv) Indicate the following layer is also known as stratum germinativum?
- a) Stratum corneum  
b) Stratum basale  
c) Stratum spinosum  
d) Stratum lucidum

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Distinguish the various functions of the skeletal system (3)
3. Explain about cerebellum with labelled diagram (3)
4. Explain about Grey & white matter (3)
5. Compare between the Arteries and The Veins. (3)
6. Justify the statement: actin and myosin proteins are responsible for striations in the muscles. (3)

OR

Write the name of the proteins present in the myofibrils. (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe about Endocrine system, its major organs and functions briefly. (5)
8. Write the properties of cardiac muscle. (5)
9. Describe about types of joints in human body with example & diagram. (5)
10. Explain about the structure, function and types of Neurons with labelled diagram. (5)
11. Analyse the functions of the lymphatic systems. (5)
12. Malignant tumors need continuous supply of oxygen and nutrients. Anti-angiogenic drugs (5) inhibit the formation of blood vessels. Explain why anti-angiogenic drugs can be used for the treatment of malignant tumors.

OR

Differentiate between the different layers present in the blood vessels. (5)

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