



46128&46134



**BRAINWARE UNIVERSITY**

**Term End Examination 2025-2026**

**Programme – B.Sc. Nursing-2025**

**Course Name – Applied Anatomy & Applied Physiology**

**Course Code - ANAT 105 & PHYS 110**

**( Semester I )**

**Full Marks : 75**

**Time : 3:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable. Write answer of Section – A and Section –B in separate Answer booklet.]

**Section : A  
(Applied Anatomy)**

**Marks : 37**

**Group-A  
(Multiple Choice Type Question)**

**6 x 1=6**

**1. Choose the correct alternative from the following :**

(i) Match the another name of windpipe

- |            |               |
|------------|---------------|
| a) Lungs   | b) Larynx     |
| c) Trachea | d) Oesophagus |

(ii) Identify the part of the digestive system which is responsible for the production of bile?

- |            |                    |
|------------|--------------------|
| a) Stomach | b) Small intestine |
| c) Liver   | d) Pancreas        |

(iii) Identify the structures carrying oxygenated blood away from the heart

- |                     |                       |
|---------------------|-----------------------|
| a) Pulmonary vein   | b) Aorta              |
| c) Pulmonary artery | d) Superior vena cava |

(iv) Choose the primary structure responsible for vision in the human eye.

- |           |           |
|-----------|-----------|
| a) Cornea | b) Retina |
| c) Lens   | d) Iris   |

(v) Identify the structure in the ear that is involved in converting sound vibrations into electrical signals.

- |                      |                    |
|----------------------|--------------------|
| a) Tympanic membrane | b) Cochlea         |
| c) Auditory nerve    | d) Eustachian tube |

(vi) Name the pear-shaped organ where the embryo implants:

- |           |           |
|-----------|-----------|
| a) Ovary  | b) Cervix |
| c) Uterus | d) Vagina |

**Group-B**  
**(Long Answer Type Questions)** 1 x 10=10

*(Answer any One from the following)*

2. Outline the structure of thyroid gland with neat label diagram. Enlist the hormones of thyroid gland. 5+5=10 (10)

OR

Draw the structure of Ear. Explain about middle ear in short. 5+5=10 (10)

**Group-C**  
**(Short Answer Type Questions)** 3 x 5=15

*(Answer any Three from the following)*

3. Construct a neat labelled diagram of urinary systems. (5)

4. Define Stomach and explain the parts of Digestive System (5)

OR

Explain the mechanism of regulation of body temperature. (5)

5. Discuss the CSF in detail (5)

OR

Discuss the structure of a neuron with the diagram. (5)

**Group-D**  
**(Very Short Answer Type Questions)** 3 x 2=6

6. Tell the composition of saliva. (2)

7. Define Skeletal Muscle (2)

8. Name the part of the spinal cord (2)

**Section : B**  
**(Applied Physiology)** Marks : 38

**Group-A**  
**(Multiple Choice Type Question)** 7 x 1=7

9. Choose the correct alternative from the following :

(i) Choose the form in which most oxygen is transported in blood:

- |                        |                         |
|------------------------|-------------------------|
| a) Dissolved in plasma | b) As carboxyhemoglobin |
| c) Bound to hemoglobin | d) As bicarbonate ions  |

(ii) Identify the normal tidal volume for a healthy adult at rest:

- |               |                |
|---------------|----------------|
| a) 400-500 mL | b) 200-300 mL  |
| c) 600-700 mL | d) 800-1000 mL |

(iii) Identify the term for rhythmic contractions that propel food through the digestive tract:

- |                 |                   |
|-----------------|-------------------|
| a) Segmentation | b) Emulsification |
| c) Mastication  | d) Peristalsis    |

(iv) Find the natural pacemaker of the heart.

- |                    |                  |
|--------------------|------------------|
| a) AV node         | b) Bundle of His |
| c) Purkinje fibers | d) SA node       |

- (v) Select the correct path of systemic circulation.
- a) Left ventricle → aorta → body → right atrium      b) Right ventricle → lungs → left atrium
- c) Left atrium → pulmonary vein → lungs      d) Right atrium → vena cava → lungs
- (vi) Name the site of spermatogenesis.
- a) Prostate      b) Seminiferous tubules
- c) Epididymis      d) Vas deferens
- (vii) Select the "fight or flight" response system.
- a) Enteric      b) Parasympathetic
- c) Sympathetic      d) Somatic

**Group-B**

**(Long Answer Type Questions)**

1 x 10=10

*(Answer any One from the following)*

10. Discuss the mechanism of respiration. Explain the transportation of gases between lungs and tissues 5+5=10 (10)

**OR**

- Elaborate the major structures of the cardiac conduction system. Explain their roles in heartbeat initiation and coordination. 5+5=10 (10)

**Group-C**

**(Short Answer Type Questions)**

3 x 5=15

*(Answer any Three from the following)*

11. Describe the phases of the menstrual cycle and the hormonal changes occurring in each phase. (5)
12. Describe the normal heart rate values and discuss the factors causing variations. (5)

**OR**

- Describe the structure of the pituitary gland and its role in regulating other endocrine glands. (5)
13. Describe the composition of gastric juice and explain its role in protein digestion. (5)

**OR**

- Explain the hormonal and neural regulation of pancreatic secretion. (5)

**Group-D**

**(Very Short Answer Type Questions)**

3 x 2=6

14. Define Intracellular Fluid(ICF) (2)
15. Tell the stages of erythropoiesis (2)
16. Define joints (2)

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