

**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR
(GIET UNIVERSITY)**



B.Sc. Nursing (First Semester) Examinations, January – 2025
**ANAT 105 & PHYS 110 - APPLIED ANATOMY & APPLIED
PHYSIOLOGY**

Time: 3 hrs

Maximum: 75 Marks

The figures in the right hand margin indicate marks.

Section - A :<(APPLIED ANATOMY) > (37 Marks)

PART – A: (Multiple Choice Questions)

(6 x 1=6 Marks)

Q. 1 Answer **ALL** questions

- a. Which tissue type is responsible for transmission of electrical impulses in the body?

(i) Connective tissue	(ii) Epithelial tissue
(iii) Nervous tissue	(iv) Muscular tissue
- b. The layer of uterus which is responsible for shedding during menstruation is called:

(i) Myometrium	(ii) Endometrium
(iii) Perimetrium	(iv) Ovary
- c. Which of the following is not a part of CNS?

(i) Brain	(ii) Spinal cord
(iii) Cranial nerve	(iv) Brainstem
- d. The largest bone in the human body is the:

(i) Humerus	(ii) Tibia
(iii) Femur	(iv) Radius
- e. The hypothalamus controls the release of hormones from the:

(i) Pancreas	(ii) Adrenal gland
(iii) Pituitary gland	(iv) Thyroid gland
- f. The vertebrae in the neck region are called:

(i) Lumbar	(ii) Thoracic
(iii) Sacral	(iv) Cervical

PART – B: (Very Short Answer Questions)

(3 x 2=6 Marks)

Q.2. Answer **ANY THREE** questions

- a. Lists out the names of cranial nerves.
- b. Write the feedback loops involved in endocrine regulation.
- c. Classification of the muscles in human body.
- d. List out the layers of the heartwall.

PART – C: (Short Answer Questions)

(3 x 5= 15 Marks)

Q.3. Answer **ANY THREE** questions

- a. Write a short notes on blood supply of brain.
- b. Explain the anatomical structure involved in process of hearing.
- c. Write a short note on pituitary gland.
- d. Explain briefly about the structure of eye.

PART – D: (Long Answer Questions)**(10 x 1= 10 Marks)**Answer ALL questions

Marks

- 4.a. Draw a neat and a labelled diagram of digestive system. 2
- b. Explain the anatomy of digestive tract, detailing the structure of each segment from digestive system. 8

(OR)

- c. Draw a neat and a labelled diagram of urinary system. 2
- d. Briefly explain about the parts of urinary system. 8

Section - B: <Applied Physiology > (38 Marks)**PART – E: (Multiple Choice Questions)****(7 x 1 = 7 Marks)**Q. 5 Answer ALL questions

- a. In which of these organelles is chromatin found?
- | | |
|----------------------------------|----------------------|
| (i) Smooth endoplasmic reticulum | (ii) Golgi apparatus |
| (iii) Mitochondria | (iv) Nucleus |
- b. Which part of the brain regulates body temperature, hunger, and thirst?
- | | |
|---------------------|-------------------|
| (i) Cerebral cortex | (ii) Cerebellum |
| (iii) Brainstem | (iv) Hypothalamus |
- c. Which part of the male reproductive system stores sperm?
- | | |
|--------------------|---------------------|
| (i) Testes | (ii) Epididymis |
| (iii) Vas deferens | (iv) Prostate gland |
- d. Which type of muscle is responsible for voluntary movements?
- | | |
|----------------------|---------------------|
| (i) Skeletal muscle | (ii) Smooth muscle |
| (iii) Cardiac muscle | (iv) Adipose tissue |
- e. Which stage of mitosis is characterized by the alignment of chromosomes at the centre of the cell?
- | | |
|-----------------|----------------|
| (i) Prophase | (ii) Anaphase |
| (iii) Metaphase | (iv) Telophase |
- f. Which blood vessels carry oxygenated blood away from the heart?
- | | |
|-------------------|------------------------|
| (i) Arteries | (ii) Veins |
| (iii) Capillaries | (iv) Lymphatic vessels |
- g. What is the primary function of the mouth?
- | | |
|-----------------------------|--|
| (i) To digest carbohydrates | (ii) To digest fats |
| (iii) To digest proteins | (iv) To break down food into smaller particles |

PART – F: (Very Short Answer Questions)**(3 x 2 = 6 Marks)**Q.6. Answer ANY THREE questions

- a. Define cell cycle.
- b. Mention the function of saliva.
- c. Define hypoxia.
- d. Discuss the function of skin.

PART – G: (Short Answer Questions)**(3 x 5 = 15 Marks)**Q.7. Answer ANY THREE questions

- a. Explain the concept of reflexes including the role of sensory receptors.
- b. Explain the process of oogenesis including the role of hormones and ovaries.
- c. Illustrate the transport of substrate through cell membrane.
- d. Describe the structure and function of eye.

PART – H: (Long Answer Questions)

(10 x 1 = 10 Marks)

Answer **ALL** questions

Marks

- 8.a. Enumerate the composition, function, and formation of CSF.
b. Describe the structure and functions of urine.

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(OR)

- c. Describe about menstrual cycle.
d. Describe the function and composition of blood.

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