22BCU524A

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2025
(Fifth Semester)

Branch – **BIOCHEMISTRY**

MAJOR ELECTIVE COURSE – I: PHYSIOLOGY AND ENDOCRINOLOGY

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1 A type of proteolytic enzyme found in an infant's gastric juice that helps in the digestion of milk is_____
(i) Peptide (ii) Rennin
(iii) Amylase (iv) Pepsin

2 The contractile protein of skeletal muscle involving ATPase activity is _____
(i) Actin (ii) Myosin
(iii) Troponin (iv) Tropomyosin

3 The neuroglia responsible for the formation of myelin sheath around axons in PNS is_____
(i) Microglia (ii) Astrocytes
(iii) Schwann cells (iv) Oligodendrocytes

4 Grave's disease is due to
(i) Hyperactivity of adrenal cortex (ii) Hypoactivity of the thyroid gland
(iii) Hyperactivity of thyroid gland (iv) Hypoactivity of adrenal medulla

5 What hormone is not secreted by the cells of pancreatic islets?
(i) Insulin (ii) Glucagon
(iii) Somatostatin (iv) None of the above

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a. Describe the composition and functions of Succus entericus.
OR
b. Elucidate ABO blood grouping method.

7 a. Explain the physiology of glomerular filtration.
OR
b. Draw the neat sketch of heart and label the parts.

8 a. Differentiate depolarization and repolarization phases of action potential.
OR
b. Explain the physiology of vision.

Cont...

9 a. Classify the hormones based on their chemical nature.

OR

b. Justify why pituitary gland is considered as master gland.

10 a. Explain the physiological actions of Corticosteroids.

OR

b. Explain the physiological functions of insulin.

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a. Elucidate how O_2 is transported from the lungs to tissues.

OR

b Discuss the types of anemia.

12 a. Elucidate the events of the cardiac cycle.

OR

b. Explain the process of urine formation.

13 a. Explain the mechanism of nerve impulse transmission.

OR

b. Bring out the composition and functions of CSF.

14 a. Compare the causes, signs, and symptoms of Gigantism and Dwarfism.

OR

b. Explain the biosynthesis of T3 and T4 hormones.

15 a. Compare Cushing syndrome and Addison's disease.

OR

b. Describe the biological actions and disorders of androgens.

Z-Z-Z END