

Sl. No. of Ques. Paper : 2036

GC-3

Unique Paper Code : 32491303

Name of Paper : Hormone Biochemistry and Function

Name of Course : B.Sc. (H) Biochemistry (CBCS)

Semester : III

Duration : 3 hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt five questions in all. Question No. 1 is compulsory.

1A. Define the following terms:

- a. Polydipsia
- b. Autocrine Response
- c. Receptor Down regulation
- d. Parturition
- e. Natriuresis
- f. Goitrogen

(1.5 x 6=9)

B. Comment on the following statements.

- a. Premenopausal women have lower incidence of cardiovascular disorder.
- b. Lactation acts a natural contraceptive
- c. Endorphins are natural analgesics
- d. Growth hormone is considered to be a trophic hormone
- e. Kidney acts as an endocrine organ

(2 x 5= 10)

2. Diagrammatically illustrate the following:

- a. Renin Angiotensin system and sodium homeostasis
- b. Outline the feedback regulation cascade of hormone secretion
- c. Outline mechanism of action of Insulin

(5, 5, 4)

3. Explain the following:

- a. Different responses of Epinephrine in various tissues
- b. Direct and Indirect Effect of Growth Hormone
- c. Leptin regulates obesity

(5, 5, 4)

P. T. O.

4. Compare and Contrast the following:
- Mineralocorticoids and Glucocorticoids
 - NIDDM and IDDM
 - Oxytocin and Vasopressin
 - Secretin and Gastrin
 - PKC and PKG
- (3.5, 3.5, 2.5, 2.5, 2)
5. Give the location and significance of the following cells of the endocrine glands:
- Alpha cells of Islet of Langerhans
 - C cells
 - Leydig Cells
 - Chromaffin cells
 - Paraventricular Nuclei
 - G cells
 - Thecal Cells
- (2 x 7 = 14)
- 6A. Discuss the etiology and biochemical basis of the following:
- Graves Disease
 - Osteoporosis
- (2.5 x 2 = 5)
- B. Answer in brief.
- Expand POMC. Give its significance.
 - Diagrammatically illustrate JAK-STAT Pathway.
 - Vit D acts as a hormone.
- (3x3 =9)
7. A give the full forms for the following and explain their significance:
- GIP
 - EGF
 - COMT
 - GHRH
 - IGF-1
 - SH2 Domain
 - MAP Kinase
- (2 x 7 = 14)
8. Write short notes on the following:
- Scatchard Analysis
 - Hypothalamic - Hypophysial Axis
 - Endocrine secretion of Liver and Kidney
 - Steroid Receptor Superfamily
- (3.5 x 4 = 14)