

5. (a) Write a short note on neuroendocrine control of the immune system. 6
 (b) Discuss the JAK-STAT signaling pathway in detail. 9
6. Write short notes on any **three** : 5×3=15
 (i) Feedback in signalling pathways
 (ii) Recombinant protein hormones and their application
 (iii) Hormones of the GI tract
 (iv) Hypothalamo-hypophyseal-gonadal axis

[This question paper contains 4 printed pages]

Your Roll No. :**Sl. No. of Q. Paper** : **267 I**

Unique Paper Code : 2233010015

Name of the Paper : DSE-15 : Human
Endocrinology-
(NEP-UGCF)Name of the Course : **B.Sc. (Hons.) Zoology/
B.Sc. (P) Life Science**

Semester : VI

Time : 3 Hours **Maximum Marks : 90****Instructions for Candidates :**

- (a) Write your Roll No. on the top immediately on receipt of this question paper.
 (b) Attempt **five** questions in all.
 (c) Question No. **1** is compulsory.
 (d) Draw neat and well-labelled diagrams wherever needed.

1. (a) Define the following terms : 10
 (i) Acromegaly
 (ii) Circadian rhythm

- (iii) Xenoestrogens
- (iv) Metabolic dysfunction
- (v) Epigenetics
- (b) Differentiate between **each** of the following pairs : 10
 - (i) Autocrine and paracrine signalling
 - (ii) Adenohypophysis and Neurohypophysis
 - (iii) Water-soluble and lipid-soluble hormone action
 - (iv) Neurohormones and neuropeptides
 - (v) Sertoli and Leydig cells
- (c) Give the location and function of the following : 5
 - (i) Supraoptic Nucleus
 - (ii) Oxyphil cells
 - (iii) Thyroglobulin
 - (iv) Chromaffin cells.
 - (v) Corpus luteum

- (d) Expand the following : 5
 - (i) HRT
 - (ii) IGF
 - (iii) cGMP
 - (iv) SHBG
 - (v) HREs
- 2. (a) Describe the hypothalamic control of pituitary hormone secretion. 9
- (b) Discuss in brief the neuroendocrine regulation of stress hormones. 6
- 3. (a) What is sleep apnea? Briefly comment upon its treatment and the resultant endocrine disruptions associated with it if left untreated. 8
- (b) What is central precocious puberty? Describe the various genetic and non-genetic factors that influence the onset of CPP. 7
- 4. Describe the various hormone classes and discuss in detail the biosynthesis of steroid hormones. 15