AB-234346

M.Sc. (Semester-IV) Examination, June-2025

(Backlog)

ZOOLOGY

(Comparative Endocrine Physiology)

Time Allowed: Three Hours

Maximum Marks: 70

Note: This question paper is divided into four sections. All sections are **compulsory**. Attempt questions as per instructions given in each section.

SECTION-A

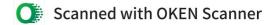
(Objective Type Questions)

Note: Attempt any ten questions. Each question carries 1 mark. [10x1=10]

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(1)

[P.T.O.]



| 1. | (A) | Fill in the blanks: | | |
|-----|-------|---|--|--|
| | (i) | Which hormone is known as Sunshine hormone | | |
| | | | | |
| | (ii) | Corpus allata secreteshormone. | | |
| | (iii) | Calcitonin and Parathormone controls thehomeostasis in body. | | |
| | (iv) | Precursor of all the steroid hormone is | | |
| | (v) | In fish,gland plays a key role in osmoregulation by producing prolactin and cortisol. | | |
| | (vi) | In insects,hormone regulates molting and metamorphosis. | | |
| | (B) | Multiple Choice Questions: | | |
| | (vii) | Juvenile hormone is secreted by the gland : | | |
| | | (a) Corpus allata | | |
| | | (b) Corpus cardiaca | | |
| | | (c) Corpus luteum | | |
| | | (d) Corpus hemorrhagicum | | |
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| (viii) | The horr | mone responsible for "flight and fight" is: | | |
|----------------------------|----------|---|--|--|
| | (a) | Thyroxine and Melatonin | | |
| | (b) | nsulin and Glucagon | | |
| | (c) | Epinephrine and Nor-epinephrine | | |
| | (d) | Estrogen and Progesterone | | |
| (ix) | Blood p | pressure and Water balance is regulated none: | | |
| | (a) | Renin | | |
| of 24 | (b) | Epinephrine | | |
| | (c) | Angiotensin | | |
| | (d) | Aldosterone | | |
| (x) | Which | one is not the function of Insulin? | | |
| | (a) | Decreasing glycogenolysis | | |
| | (b) | Lipogenesis | | |
| | (c) | Gluconeogenesis | | |
| | (d) | Glucogenesis | | |
| AB-234346/500 (3) [P.T.O.] | | | | |

| | (xi) | Which | one of the following endocrine glands in | | |
|---|-------|--------|--|--|--|
| | | (a) | Posterior pituitary | | |
| | | (b) | Pineal gland | | |
| | | (c) | Adrenal medulla | | |
| | | (d) | Hypothalamus | | |
| | (xii) | transo | of the following is a neuroendocrine ducer in the hypothalamic - pituitary - and (HPI) axis in fish? | | |
| | | (a) | Prolactin | | |
| | | (b) | Cortisol | | |
| | | (C) | CRH | | |
| | | (d) | Thyrotropin | | |
| | | | SECTION-B | | |
| (Very Short Answer Type Questions) | | | | | |
| Note: Attempt any five questions. Each question carries 2 marks. [5x2=10] | | | | | |
| AB-234346/500 (4) | | | | | |

| 2. | (i) | Hormone | | |
|-------|---------|--|--|--|
| | (ii) | Chemical nature of Ecdysone | | |
| | (iii) | Urophysis | | |
| | (iv) | Ultimo-branchial body | | |
| | (v) | Parathyroid gland | | |
| | (vi) | Calcitonin | | |
| (vii) | | Vitellogenesis | | |
| | | SECTION-C | | |
| | | (Short Answer Type Questions) | | |
| Note | : Attem | pt any five questions. Each question carries 4 s. [5x4=20] | | |
| 3. | (i) | Catecholamine biosynthesis | | |
| | (ii) | Evolution of Viviparity | | |
| | (iii) | Renin-Angiogenesis systems in Vertebrate | | |
| | (iv) | Synthesis of Parathyroid hormone | | |
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- (v) Gluconeogenesis
- (vi) Glucose homeostasis
- (vii) Phylogeny of Endocrine gland system

SECTION-D

(Essay Type Questions)

Note: Attempt any three questions. Each question carries 10 marks. [10x3=30]

- (i) Explain how pituitary gland evolved in different vertebrates in detail.
 - (ii) Explain feeding behaviour and gastro intestinal hormone actions in vertebrates.
 - (iii) Describe endocrine control of various physiological mechanisms in insects and crustaceans.
 - (iv) Explain evolution of thyroid gland and synthesis and regulation of thyroid gland in detail.

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(6)