

**D-6543**

**M.Sc. (IV<sup>th</sup> Semester) Examination, 2020**

**ZOOLOGY**

**(Comparative Endocrine Physiology)**

*Time Allowed : Three Hours*

*Maximum Marks : 70*

**SECTION - A**

**(Objective Type)**

**Note :** Attempt any ten questions. Each question carries one mark. **1×10=10**

**Q. 1.** Fill in the blanks :

- (i) Chemical messengers secreted by ductless glands are called \_\_\_\_\_.
- (ii) The primary role of the parathyroid gland is to regulate \_\_\_\_\_.
- (iii) Acromegaly caused by over production of \_\_\_\_\_.

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- (iv) Leydig cells produces \_\_\_\_\_.
- (v) The main function of aldosterone is to increase \_\_\_\_\_.
- (vi) Which of the following is NOT an endocrine gland ?
  - (a) Hypothalamus
  - (b) Pituitary
  - (c) Parathyroid
  - (d) Pancreas
- (vii) What is the precursor of steroid hormone ?
  - (a) Protein
  - (b) Cholesterol
  - (c) Carbohydrate
  - (d) Lipid

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(viii) Which of the following is growth hormone inhibiting hormone ?

- (a) FSH
- (b) TRH
- (c) GHRH
- (d) Somatostatin

(ix) Which of the following are Sertoli cells responsible for producing ?

- (a) Testosterone
- (b) Androgen binding globulin (ABG)
- (c) Oestrogen
- (d) Gonadotrophin releasing hormone (GnRH)

(x) Which of the following hormones are stored in the posterior pituitary gland ?

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- (a) Oxytocin
- (b) Vasopressin
- (c) Both (a) and (b)
- (d) None

(xi) Which of this statement is INCORRECT regarding the function of hormones ?

- (a) Reproduction and sexual differentiation
- (b) Maintenance of internal environment
- (c) Maintain body temperature
- (d) Development and growth

(xii) The hormone progesterone causes what to occur in women ?

- (a) Follicle Development
- (b) Development of the Uterine Lining
- (c) Spermatogenesis
- (d) Female Secondary Sex Characteristics

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**SECTION - B**

**Note :** Attempt any five questions. Each question carries  
2 marks. **5×2=10**

**Q. 2.** Very Short Answer Type (25-30 words) :

- (i) What is hormone ?
- (ii) Name of the hormones secreted from pituitary gland.
- (iii) What is the main function of renin angiotensin system ?
- (iv) What do you mean by Islets of Langerhans ?
- (v) What is paracrine secretion ?
- (vi) Name the hormones secreted from adrenal gland.
- (vii) What is glucose homeostasis ?

**SECTION - C**

**Note :** Attempt any five questions. Each question carries  
4 marks. **5×4=20**

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**Q. 3.** Short Answer Type (250 words) :

- (i) Explain feedback mechanism of hormone with suitable example.
- (ii) Explain mode of hormone secretion.
- (iii) Structure and synthesis of corticosteroid.
- (iv) Renin angiotensin system.
- (v) Catecholamine biosynthesis.
- (vi) Thyroid hormone biosynthesis.
- (vii) Evolution of viviparity.

**SECTION - D**

**Note :** Attempt any three questions. Each question carries  
10 marks. **3×10=30**

**Q. 4.** Essay Type (more than 500 words) :

- (i) Explain in details endocrine control of physiological mechanisms in annelids with suitable example.

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- (ii) Explain in detail how pituitary gland evolved in different vertebrates : A comparative analysis.
- (iii) Explain in detail the synthesis and role of glucocorticoid in gluconeogenesis with feedback mechanism.
- (iv) Explain in detail the evolution of thyroid gland.

