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5 SEM TDC ZOO M 7

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(November)

ZOOLOGY

(Major)

Course : 507

(**Endocrinology**)

Full Marks : 48

Pass Marks : 19 (Backlog)/14 (2014 onwards)

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer Question No. 1 and **any three** from the rest

1. (a) Fill in the blanks : 1×5=5

(i) The growth hormone is chemically a globular protein secreted by _____ cells of the adenohypophysis.

(ii) In pigeons and dove, the secretion of crop milk is stimulated by _____ hormone.

- (iii) The hormones of parathyroid glands are mainly responsible for metabolism of phosphate and _____.
- (iv) The two polypeptide chains of active insulin are actually derived from a single polypeptide molecule called _____.
- (v) Epinephrine and norepinephrine are also called catecholamine secreted by adrenal _____.
- (b) Rewrite the following sentences with correct option : 1×4=4
- (i) The thickening and puffiness of skin in adult human being is due to hyperthyroid/hypothyroid/hypoadrenal activity.
- (ii) Cushing's disease is due to hypersecretion of thyroid hormones/glucocorticoids/mineralocorticoids.
- (iii) Prothoracic or thoracic gland of arthropods secretes a hormone, popularly known as juvenile hormone / moulting-hormone / pheromone.

(iv) All the hormones secreted by adrenal cortex are chemically protein/steroid/amino acid derivatives in nature.

(c) Write short notes on any *three* of the following : 3×3=9

- (i) Corpora allata
- (ii) Oral contraceptive
- (iii) Corpus luteum
- (iv) Neurosecretory cell
- (v) Islets of Langerhans

2. What do you mean by trophic hormone? Why is growth hormone also called as somatotrophic hormone? Discuss in brief the states of hypo- and hyper-secretion of growth hormone in man. 2+2+6=10

3. What is hypothalamohypophyseal portal system? Discuss the mechanism of regulation of adenohypophyseal hormone secretion with suitable diagram. 2+6+2=10

4. Name the hormones concerned with maintenance of pregnancy, parturition and lactation with their chemical nature. Describe briefly the mechanism of hormone concerned with pregnancy and parturition. 6+4=10

5. What is amniocentesis? Describe its method or protocol. Mention the merits of amniocentesis. $2+4+4=10$
6. Write an account of comparative anatomy of pituitary/thyroid gland in fishes, Amphibia and mammals with suitable diagram. $8+2=10$
