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ZOOLOGY

( Major )

Paper : 5.3

( **Endocrinology and Immunology** )

Full Marks : 60

Time : 3 hours

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

1. Write True or False : 1×7=7

- (a) The process of weakening a pathogen is called immunization.
- (b) Segments of antigen that are recognized by antibody are epitopes.
- (c) Mast cells have receptor for IgE.
- (d) Secondary immune response is generated by Naive T cells.
- (e) Regression of the corpus luteum is associated with the withdrawal of progesterone.



(f) Hypothalamus controls the secretion of melanophore stimulating hormone (MSH).

(g) In adult, insufficient thyroxine can lead to myxoedema.

2. Write briefly about the following :  $2 \times 4 = 8$

(a) Natural killer cells

(b) Hypothalamo-hypophysial axis

(c) Hyperimmunity

(d) Chemical nature of hormone

3. Write short notes on any three of the following :  $5 \times 3 = 15$

(a) Antigen-antibody interaction

(b) Second messenger hypothesis

(c) Cytotoxic T cell

(d) Physiological functions of endocrine pancreas

(e) Role of thyroid hormone in amphibian metamorphosis

4. Discuss the respective roles of parathormone and calcitonin in calcium homeostasis.  $5+5=10$

Or

What do you mean by tropic hormone? Discuss major tropic hormones secreted by anterior pituitary of pituitary gland.  $2+8=10$

5. What are the features of an effective vaccine? Give a brief account of different types of vaccine in use.  $5+5=10$

Or

Describe the role of MHC molecules in recognition of antigens and immune response. 10

6. Distinguish between primary and secondary immunodeficiencies. Write a brief note on the acquired immunodeficiency syndrome.  $4+6=10$

Or

Discuss the histology and endocrine functions of adrenal cortex.  $4+6=10$

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