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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 : 2×4=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 : 5×3=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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