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3 (Sem-5) ZOO M3

2021

( Held in 2022 )

**ZOOLOGY**

( Major )

Paper : 5-3

**( Endocrinology and Immunology )**

Full Marks : 60

Time : Three hours

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

1. Write true **or** false : 1×7=7
- (a) Mast cells have receptor for IgE.
  - (b) Parathyroid hormone stimulates intestinal absorption of dietary calcium.
  - (c) The process of weakening a pathogen is called immunization.
  - (d) Oxytocin hormone acts through a nuclear receptor.

Contd.

(e) Secondary immunoresponse is generated by naive T cells.

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

(g) Cytotoxic T cells destroy pathogens by engulfing them.

2. Distinguish between the following:  $2 \times 4 = 8$

(a) Innate immunity and Acquired immunity

(b) Neurohormone and Neurohumor

(c) Helper T cells and Cytotoxic T cells

(d) Zona glomerulosa and Zona reticularis

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

(a) Endocrine function of anterior pituitary

(b) Autoimmunity

(c) Biosynthesis of thyroid hormone

(d) Mineralocorticoids

4. What is pro-insulin? Write about the molecular structure and functions of insulin hormone.  $2+8=10$

**Or**

Describe the role of MHC molecules in recognition of antigen and immuno response.  $10$

5. What is hypothalamo-hypophyseal axis? Discuss the role of hypothalamic factors in the regulation of endocrine functions of pituitary.  $3+7=10$

**Or**

Define humoral immune response. Discuss the role of B and T lymphocytes in the generation of humoral immune response.  $2+(4+4)=10$

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

**Or**

What is tropic hormone? Write about the tropic hormones secreted from the adrenal gland of vertebrate animal.  $4+6=10$