

2016

ZOOLOGY

( Major )

Paper : 5:3

Full Marks : 60

Time : 3 hours

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

1. Choose the correct answer :  $1 \times 7 = 7$

(a) Which of the following is a neuro-hormone?

(i) Prolactin

(ii) Gonadotropin-releasing hormone

(iii) Cortisol

(iv) Thyronine

(b) Which of the following hormones is a steroid?

(i) Oxytocin

(ii) ACTH

(iii) Glucagon

(iv) Estradiol

- (c) Which of the following is not an action of epinephrine?
- (i) Elevation of blood sugar
  - (ii) Vasoconstriction
  - (iii) Increased cardiac output
  - (iv) Decreased heart rate
- (d) Kupffer cells are macrophages found in
- (i) bone marrow
  - (ii) liver
  - (iii) pancreas
  - (iv) intestinal epithelium
- (e) The antibody isotype which can exist as a dimer is
- (i) IgG
  - (ii) IgE
  - (iii) IgA
  - (iv) All of the above
- (f) Which of the following is immunoglobulin light chain?
- (i) mu ( $\mu$ )
  - (ii) alpha ( $\alpha$ )
  - (iii) lambda ( $\lambda$ )
  - (iv) gamma ( $\gamma$ )

(g) An example of a systemic autoimmune disease is

(i) Graves' disease

(ii) type I diabetes mellitus

(iii) rheumatoid arthritis

(iv) autoimmune Addison's disease

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

(a) Common lymphoid progenitor cell and common myeloid progenitor cell

(b) MHC class I and MHC class II molecules

(c) A cells and B cells of pancreatic islets

(d) Corpus luteum and corpus albicans

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

(a) Mechanism of steroid hormone action

(b) Histological structure of thyroid gland

(c) Hormones of anterior pituitary

(d) Hormonal control of calcium homeostasis

(e) Immunodeficiency diseases

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

Or

Give an account of the innate host defences against infection. 10

5. Discuss T cell-mediated cytotoxicity. 10

Or

Give an account of the endocrine function of pancreas. 10

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

Or

Give an account of the physiological actions of thyroid hormones. 10

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