2019

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. Choose the correct answer : 1×7=7

(a) Thyroid hormone synthesis involves the iodination of

(i) tyrosine

(ii) alanine

(iii) tryptophane

(iv) methionine

(b) The hormone which acts through a nuclear receptor is

(i) growth hormone

(ii) insulin

(iii) oxytocin

(iv) thyroid hormone

(c) In the adrenal gland, glucocorticoids are secreted by

(i) zona glomerulosa

(ii) zona fasciculata

(iii) zona reticularis

(iv) medulla

(d) The binding of an antigen by its antibody involves

(i) hydrogen bonds

(ii) electronic forces

(iii) Van der Waals forces

(iv) All of the above

(e) Which antibody is responsible for allergic reaction?

(i) IgM

(ii) IgA

(iii) IgF

(iv) IgD

(f) What cells destroy pathogens by engulfing them?

(i) Cytotoxic T cells

(ii) Basophils

(iii) Eosinophils

(iv) Macrophages

(g) Peyer's patches are secondary lymphoid organs found

(i) in the nasal epithelium

(ii) within the wall of the small intestine

(iii) in the lining of the stomach

(iv) in the lung

2. Distinguish between the following : 2×4=8

(a) Diabetes mellitus and Diabetes insipidus

(b) Helper T cells and cytotoxic T cells

(c) MHC class I and MHC class II molecules

(d) Corpus luteum and Corpus albicans

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

(a) Endocrine function of posterior pituitary

(b) Biosynthesis of thyroxine

(c) Minerals corticoids

(d) Immunodefficiency disease

(e) Pathogen-associated molecular patterns

4. Describe the histology and endocrine functions of mammalian ovary. 5+5=10

Or

Discuss the mechanisms of action of protein hormone. 10

5. Describe the structure of an antibody molecule and write briefly about the function of the different antibody classes. 4+6=10

Or

What do you mean by humoral immune response? Discuss the role of B- and T-lymphocytes in the generation of humoral immune response. 2+8=10

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

Or

What is hypothalamohypophyseal axis? Discuss the role of hypothalamic factors in the regulation of endocrine function of the anterior pituitary. 3+7=10

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