

2012

HUMAN PHYSIOLOGY

PAPER—PHY-302

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

UNIT — 27

Answer any *two* questions from the following :

1. (a) Discuss in brief the erythrocytic phase of the life-cycle of malarial parasites.
- (b) Give a brief account of pathogenecity of *Plasmodium falciparum*.
- (c) What are the basic reason for antigenic variation of *Plasmodium falciparum* ? 3 + 4 + 3

(Turn Over)

2. (a) What do you understand by molecular phylogenetics? What is its significance?
- (b) What are 'strain' and 'type strain'?
- (c) Give a brief account of the Baltimore classification of virus. $(2 + 1) + (2 + 2) + 3$
3. (a) Discuss the importance of bacterial 'pilus' and 'capsule' structures in pathogenicity.
- (b) What is the difference between aerobic and anaerobic bacteria in terms of utilizing oxygen? $(3 + 3) + (2 + 2)$
4. (a) What are antibiotics?
- (b) What are the properties of antibiotics?
- (c) Discuss the mechanism of action of antibiotics.
- (d) Discuss the mechanism of action of glucan synthesis inhibitors on fungal cell wall. $2 + 2 + 4 + 2$

UNIT - 28

1. (a) Differentiate agretope, paratope and epitope.
(b) Distinguish between primary and secondary immune response.
(c) What do you mean by clonal selection theory? 3 + 4 + 3

 2. (a) Draw the different receptors present on the surface of *T*-cell and mention their functions.
(b) How Cytotoxic *T*-lymphocyte kill the infected cell? 5 + 5

 3. (a) Define titer and prozone.
(b) Discuss the structure and function of MHC class I and class II molecules. 4 + 6

 4. (a) Distinguish between immunogenicity and antigenicity.
(b) What are the principal function of immunoglobulin *G* ?
(c) Discuss briefly what happens when an antigen reacts with its specific antibody. 2 + 3 + 5
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