

2008

**HUMAN PHYSIOLOGY**

PAPER—XIV

*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*

**Write the answers Questions of each Unit  
in separate books**

UNIT—27

Answer any *two* questions from the following

1. (a) What are Capsules ?

(b) What is the significance of capsular structure ?

(c) How pilus is related to microbial virulence ?

3 + 4 + 3

(Turn Over)

2. (a) Give a brief account of the structure of Hepatitis B virus.
- (b) Mention the different modes of transmission of Hepatitis viruses.
- (c) How hepatitis B is diagnosed? 4 + 3 + 3
3. (a) What is Nutritional Media ?
- (b) Discuss the principles for preparation of Nutritional Media for microbial growth.
- (c) What is assay media ? 3 + 5 + 2
4. (a) What is cellulitis ?
- (b) Discuss the characteristics and pathogenic ability of the causative agent of cellulitis. 3 + 3 + 4

UNIT—28

Answer any *two* questions from the following

1. (a) Write the different receptors present in the T-cell surface with suitable diagram.
- (b) Where lymph nodes are found in our body ?
- (c) How does cytotoxic T-lymphocytes (CTL) kill the infected host cell ? 3 + 2 + 5

2. “ $T_H$  and  $T_C$  cells are MHC class II and MHC class I restricted respectively.” Justify the statement with special emphasis on the role of MHC molecules in the restriction of T-cell responses. 10
3. (a) What is the preferred procedure for immunoglobulin quantitation?
- (b) What is the difference between polyclonal and monoclonal antibody?
- (c) Discuss the classical pathway of complement system. 3 + 2 + 5
4. Write short notes on the following: 2 x 5
- (i) Clonal selection theory
- (ii) Passage through placenta
- (iii) Differentiate humoral and cell mediated immunity
- (iv) Define epitope, paratope and aggretope
- (v) Define pleotrophy, redundancy and synergistic action of cytokines.