

2012

M.Sc.

3rd Semester Examination

MICROBIOLOGY

PAPER—MCB-302

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Group — A

[Marks : 20]

Answer any two questions.

1. (a) Write in short about Nosocomial Infections.
(b) Write about the normal microbial flora in human body. 5+5
2. (a) Write about the life cycle and Pathogenesis of *Leishmania donovani*.
(b) Write in short about Microbial Food Poisoning. 5+5
3. Write notes on (any four) : $2\frac{1}{2} \times 4$
 - (a) *Candida albicans* ;
 - (b) Dermatophytes ;
 - (c) Culture of *Mycobacterium tuberculosis* ;

(Turn Over)

- (d) *Giardia intestinalis* ;
- (e) Life cycle of malarial parasite.
- (f) Fungal ringworm ;
- (g) Bacteria for pyogenic meningitis.
- (h) Cholera toxin.

Group — B

[Marks : 20]

Answer any *two* questions.

4. (a) What are the global importance of vaccination for preventing infectious diseases.
- (b) Write the difference between —
- (i) Primary vs. secondary immune response.
 - (ii) Attenuated vs. heat killed vaccine.
 - (iii) DNA vs. peptide vaccine.
 - (iv) Eukaryotic vs prokaryotic expression system for preparation of recombinant protein vaccine.
- (c) What do you mean by combination vaccine.
- $2 + (1\frac{1}{2} \times 4) + 2$
5. Write the principle and application of
- (i) Enzyme immuno histochemistry ;
 - (ii) Hybridoma technology.
- 5+5
6. Write notes on (any four) :
- $2\frac{1}{2} \times 4$
- (a) Toxoid;
 - (b) Anti-idiotypic vaccine;
 - (c) Designed epitope;
 - (d) Application of agglutination reaction;
 - (e) Rh incompatibilities;
 - (f) Characteristics of enzymes used in ELISA;
 - (g) Edible vaccine;
 - (h) Immuno electrophoresis.