

2008

M.Sc.

3rd Semester Examination

BIO-MEDICAL LABORATORY SCIENCE & MANAGEMENT

PAPER—IX (Unit-17)

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.

Module-I

(Clinical Immunology)

1. Answer any five :

5×1

- (a) What is the basic function of macrophage?
- (b) Define coagglutination test?
- (c) What is innate immunity?
- (d) What do you mean by nephelometry?
- (e) What is lymphokines?
- (f) What do you mean by immune adherence?
- (g) What do you mean by respiratory burst in leukocytes?
- (h) What is HAT Medium?

(Turn Over)

2. (a) What is the basic principle of Southern blot technique? What is the application of this technique?
- (b) How do you interpret the result of HIV detection through Western blot?
- (c) Write the principle of complement fixation test along with an example: (2+1)+2+3

Or

- (a) How do you perform Rocket immuno-electrophoresis? Mention its application.
- (b) Distinguish between hypersensitivity Type-I and Type-IV reactions with respect to immunopathological mechanisms. (3+1)+4
3. (a) Describe the immunological roles of HL-antigens in tissue transplantation.
- (b) How the histocompatible Ag could be detected? 4+3

Or

- (a) What is cytokine?
- (b) How immunity can affect the growth and progression of a tumour?
- (c) Mention the role of cytokines in tumour formation. 1+(2+2)+2

Module-II

(Serology)

4. Answer any *five* questions : 1×5
- (a) Write the name of a test in diagnostic serology where sandwich ELISA is performed
 - (b) What is mean by heat-inactivation of serum sample ?
 - (c) What is spirochaet ?
 - (d) Write the full form of TPPA.
 - (e) What is the clinical significance of Mantoux test.
 - (f) How do you detect hydatid cyst ?
 - (g) What is SF-dye-test ?
 - (h) What is C-reactive protein ?

5. (a) Mention the different time span of antibody occurrence in different body fluids and stool after typhoidal attack.
- (b) Mention the method of Rubella IgM detection. Write the specific differences between IgM and IgG detection in Rubella infection, 2+(4+2)

Or

- (a) Why CD4⁺ & CD8⁺ count is important for a HIV-patient ?
- (b) Write the principle of capcellia method of CD4⁺ count.
- (c) Write the name of different non-flow cytometric methods of CD count.
- (d) What is the disadvantage of detection of TB through serological technique ?

2+3+2+1

6. (a) Discuss briefly with principle about aldehyde test for trypanosomiasis.
- (b) Why anti ds-DNA test is performed? Write the names of other nuclear factors? 4+(1+2)

Or

- (a) How CCP is formed in a pathological condition of RA? Mention the technique of microparticle enzyme immunoassay for detection of anti-CCP.
- (b) How do you differentiate serologically the primary and secondary dengue infection? (2+4)+1
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