

2010**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.

(Clinical Immunology & Serology)**Module-I****1. Answer any five :****1×5**

(a) A synonym for an antigenic determinant is

- (i) Immunogen;
- (ii) Epitope;
- (iii) Binding site.

(b) Where would you get NK cells?

(c) Which of the following is not a component of membrane attack complex.

- (i) C₃₆;
- (ii) C₆;
- (iii) C₇.

(Turn Over)

(d) What is the full form of ICAM??

(e) What is allograft?

(f) What is TNF- α ?

(g) What is plasma cell??

(h) What is chemotaxis?

2. (a) Describe the classical pathway of complement activation.

(b) What is co-agglutination test & mention its clinical significance. 5+(2+1)

Or

(a) Describe the immunological basis of tumor formation.

(b) Write the application of monoclonal antibody in modern biomedical science. 5+3

3. (a) Write the principle of Western Blot technique.

(b) What is prozone & post-zone phenomenon?

(c) What is RPHA? 2+3+2

Or

(a) What is the most common type of hypersensitivity?

(b) How is it mediated?

(c) What are the common antigens that cause this type of hypersensitivity?

(d) Describe effector phase. 1+1+2+3

Module-II

4. Answer any five questions : 1×5
- (a) A specimen should be reactivated when more than — hour(s) has/have elapsed since inactivation.
- (i) 1;
 - (ii) 2;
 - (iii) 4.
- (b) If a serial dilution is prepared in 1 : 2 dilution norm the final dilution in tube 6 is
- (i) 1 : 24;
 - (ii) 1 : 32;
 - (iii) 1 : 64.
- (c) The first diagnostic blood test for syphilis was :
- (i) VDRL;
 - (ii) Wassermann;
 - (iii) RPR.
- (d) Write the clinical significance of Anti-CCP test.
- (e) What is the incubation period of typhoidal agent ?
- (f) Define serology.
- (g) What are the clinical significances of hs-CRP test ?
- (h) Write the names of fluorophores tagged antibodies in double stained FTA-abs test.
5. (a) Describe briefly the different techniques of specific test for syphilis.
- (b) How do you immunologically detect typhoidal factor in stool ? 5+3

Or

- (a) How HIV infects the cell—elaborate the immunological basis ?
- (b) How do you determine the CD4⁺ count by dual platform flow cytometry ?
- (c) What is the principle of capillia method of CD4⁺ count ?
3+3+2
6. (a) What are the differences between IgG & IgM detection in toxoplasmosis ?
- (b) How do you determine the status of (current or past etc.) infection of toxoplasmoses in new born baby ?
- (c) What is indirect pregnancy test ? 2+3+2

Or

- (a) Describe the immunological basis of SLE.
- (b) How do you diagnostically differentiate between primary and secondary infection of dengue ?
- (c) What is Anti-ds-DNA ? 2+4+1
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