2009

M.Sc.

2nd Semester Examination

BIO-MEDICAL LABORATORY SCIENCE & MANAGEMENT

PAPER—VI (Unit-11)

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.

[Immuno-Haematology and Transfusion Science]

Module-I

1. Answer any *five* questions of the following : 1×5

(a) What do you mean by immunohaematology ?

(b) What are the antibodies present in the blood.

(c) What is haemolysin ?

(d) What do you mean by sensitization ?

(e) What is bacteriotropin

(f) What do you mean by Xenogenic antigen ?

(g) Write the application of Rh group.

(h) Mention the subgroups of ABO blood group.

2. (a) Write the application of Bombay blood grouping in biomedical field.

(b) Describe the procedure of reverse grouping to identify the blood groups.

(c) Which is the most common blood group in Indian population ?

(d) If the father is 'AB' and mother 'O', what are the possible genotypes of the Children ? 2+3+1+2

Or

(a) Write the principle of counter immunoelectrophoresis.

(b) Mention the diseases where immuno diffusion techniques may be done for diagnostic purpose.

(c) Describe the procedure of flouroscence antibody technique. 2+2+4

3. (a) What do you mean by superantigen ?

(b) Mention the structure of the superantigen.

(c) Write the name of the superantigen-mediated diseases and its characteristic symptoms. 2+3+2

Or

(a) Write the important properties of hapten?

(b) Mention the physiological properties of IgM.

(c) Describe the biological properties of IgD and IgE.

$2+2+(1\frac{1}{2}+1\frac{1}{2})$

Module-II

4. Answer any *five* questions of the following : 1×5

(a) Write the full form of RPMI?

(b) How the associated risks of Jaundice can be eliminated in blood transfusion?

(c) Which blood group should be reserved for use under emergency conditions?

(d) Under which clinical condition the patient should receive packed red cells?

(e) Which blood component should be given to a patient with a history of haemophilia?

(f) What do you mean by Haemosiderosis?

(g) Write the basic principle of blood transfusion?

(h) Write the function of gelatin in transfusion science?

5. (a) On what grounds are the donors rejected and why?

(b) How do you store blood?

(c) What is the shelf life of the stored blood?

(d) What changes occur in the blood during storage?

3+2+1+2

Or

(a) What are the indications for blood transfusion ?

(b) Describe the procedure of compatibility testing in vivo for blood transfusion.

(c) What are the conditions affecting the infusion of blood components in transfusion science ?

(d) What are the special precautions should be taken during the collection of blood specimen from the recipient ?

1+2+3+2

6. (a) Write the basic principle for the separation of monocyte from whole blood.

(b) How you prepared the Nylon Wool Column for the separation of T-cell and B-cell ?

(c) Describe the procedure for the separation and identification of T-cell and B-cell from whole blood.

1+2+4

Or

(a) Under what conditions will the blood bank refuse to take back the blood which is checked out for transfusion ?

(b) Enumerate the delayed reaction occur in blood transfusion.

3+4

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