

M.Sc 2nd Semester Examination , 2010

**BIOMEDICAL LABORATORY SCIENCE
AND MANAGEMENT**

(Immuno-Haematology and Transfusion Science)

PAPER— VI (U - 11)

Full Marks : 40

Time : 2 hours

Answer all questions

The figures in the right-hand margin indicate marks

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

Illustrate the answers wherever necessary

MODULE— 1

1. Answer any five of the following : 1 x 5

(a) What are the antigens present in blood ?

(b) What is haptin ?

(Turn Over)

- (c) Define titer.
- (d) Write the application of MN group.
- (e) What is reagin ?
- (f) Write the basic principle of immuno-haematology.
- (g) What do you mean by allogenic antigen ?
- (h) What is opsonin ?

2. (a) Write the principle of fluorescence antibody technique.
- (b) Describe the procedure of Ouchterlony double diffusion technique.
- (c) Mention the diseases where counter immunoelectrophoresis may be done for diagnostic purpose. 2 + 5 + 1

Or

- (a) What is superantigen ?

(b) Write the properties of superantigen and mention the symptoms due to superantigen infection.

(c) Write the mode of action of superantigen.

$$1 + (2 + 2) + 3$$

3. (a) If the father is 'O' and mother 'AB', what are the possible genotypes of the children?

(b) Write the application of reverse grouping in biomedical field.

(c) Describe the procedure of serum grouping to identify the blood groups.

$$2 + 2 + 3$$

Or

(a) Mention the physical and physiological properties of IgG.

(b) Mention the biological properties of IgA and IgM.

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

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

MODULE—2

4. Answer any *five* of the following : 1 × 5
- (a) Write the basic principle of blood transfusion ?
 - (b) Under which clinical condition the patient should receive platelet rich plasma ?
 - (c) What do you mean by erythroblastosis foetalis ?
 - (d) What is AHG test ?
 - (e) What are the common anti-coagulant used in blood transfusion ?
 - (f) What is the storage temperature of blood in blood bank ?
 - (g) How the associated risks of Hepatitis B can be eliminated in blood transfusion ?
 - (h) Mention the conditions for blood transfusion.
5. (a) What precaution and proper identification should you take during collection of blood for transfusion ?
- (b) Enumerate the immediate reaction occur in blood transfusion. 3 + 5

Or

- (a) Describe the procedure for the separation and identification of monocyte from whole blood.
- (b) What are the components in which form the blood may be transfused? 5 + 3
6. (a) What is antibody screening test?
- (b) How the blood is preserved after the collection from donors?
- (c) Describe the procedure of compatibility testing in Vitro for blood transfusion. 1 + 3 + 3

Or

- (a) Mention the general characters for the selection of donors.
- (b) How direct coomb test differ from indirect coomb test?
- (c) Write the importance of blood test before marriage to check the transmission of hemolytic diseases in next generation? 2 + 2 + 3
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