

2008

M.Sc.

2nd Semester Examination

BIO-MEDICAL LAB. 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)

Answer all questions.

Module — I

1. Answer any *five* questions of the following : 1×5
- (a) What is opsonin ?
 - (b) Mention the antigens and antibodies present in blood.
 - (c) Write the basic principle of immunohaematology.
 - (d) What is haptin ?
 - (e) How you differentiate 'O' group from Bombay group ?
 - (f) What is reagin ?
 - (g) What do you mean by allogenic antigen ?
 - (h) Define titer.

(Turn Over)

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

2+4+2

Or

- (a) Write the application of serum grouping and Rh-typing in biomedical field.
(b) Mention the physical and physiological properties of IgA.
(c) Describe the biological properties of IgG and IgM.
3. (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.

2+2+(2+2)

$1+(1\frac{1}{2}+1\frac{1}{2})+3$

Or

- (a) Explain the principles of haemagglutination inhibition and counter immuno electrophoresis procedure.
(b) What do you mean by autoimmunity?
(c) Write the application of MN group.

(2+2)+1+2

Module — II

Answer all questions.

4. Answer any *five* questions of the following : 1×5
- (a) What do you mean by autologous blood donation ?
 - (b) What is AHG test ?
 - (c) What are the common anti-coagulant used in blood transfusion ?
 - (d) How the associated risks of Malaria can be eliminated in blood transfusion ?
 - (e) Mention the conditions for blood transfusion.
 - (f) What do you mean by Sensitized RBC ?
 - (g) What is the storage temperature of blood in blood bank ?
 - (h) Mention the common diseases which are related to blood transfusion science.
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) What are the components in which form the blood may be transfused ?
- (b) Describe the procedure for the separation and identification of monocyte from whole blood. 3+5

6. (a) Describe the procedure of compatibility testing in vitro for blood transfusion.
- (b) How the blood is preserved after the collection from donors?
- (c) What is antibody screening test? 3+3+1

Or

- (a) How foeto-maternal Rh incompatibility can be diagnosed in case of new born baby and in case of mother?
- (b) Mention the importance of pre-marital blood screening.
- (c) How direct coomb test differ from indirect coomb test? 3+2+2
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