

M.Sc.

2014

2nd Semester Examination

BIOMEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER—BLM-202 (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.

Answer all questions.

(Module — 1)

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

- (a) How many antigens are there in a ABO blood group system ?
- (b) Which number of chromosome is restricted for ABO blood group ?

(Turn Over)

- (c) How many fragments are produced when IgG is digested with papain?
 - (d) What do you mean by immunogenicity?
 - (e) What is MN blood group?
 - (f) What is plasma cell?
 - (g) Why 'O' is group does not produce any antigen?
 - (h) Write the full form of HDN.
2. (a) Describe the formation of A and B antigen diagrammatically.
- (b) What is the structure of Bombay 'O' group red cell?

5+3

Or

- (a) Describe H-antigen system.
 - (b) State the role of fucosyl transferase gene in Hh antigen system.
3. (a) Explain why Du testing is important.
- (b) Describe the role of lymphoid and myeloid cells in immune system.

4+4

3+4

Or

- (a) Differentiate alloantibodies and autoantibodies.
- (b) Give a comparative analysis of different immunoglobulins.

4+3

(Module — 2)

4. Answer any *five* questions from the following : 5×1
- (a) Write the full form of CPD preservative.
 - (b) What should be the storage time of platelets prior to transfusion ?
 - (c) What is a cryoprecipitate ?
 - (d) Write the full form of FFP.
 - (e) What do you mean by irradiated red blood cell ?
 - (f) Name the conditions when platelets are required to the patients.
 - (g) What is pheresis ?
 - (h) What should be the range of ideal transportation temperature of RBC ?
5. (a) Calculate the adjusting anticoagulant and blood volume drawn for a subject having the body weight of 54 kg.
- (b) State briefly about the anticoagulant preservative solutions used for the storage of blood. 6+2
- Or*
- (a) Enumerate the characteristics features of blood collection bag.
- (b) Mention the different complications of blood transfusion. 3+5

6. (a) Mention the advantages of transfusion of the individual components instead of the whole blood.
- (b) What is erythroblastosis foetalis? 4+3

Or

Write short note on :

- (a) Importance of blood test before marriage ;
- (b) FFP ;
- (c) Reverse grouping. 2+3+2
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