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. 4+4

3. (a) Explain why Du testing is important.
(b) Describe the role of lymphoid and mycoid cells in immune system. 3+4

Or

(a) Differentiate alloantibodies and autoantibodies.
(b) Give a comparative analysis of different immunoglobulins. 4+3

C/14/M.Sc./2nd Seme./BLM-202(U-11) (Continued)
4. Answer any five questions from the following: \(5 \times 1\)
   (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. \(6 \times 2\)

   Or

   (a) Enumerate the characteristics features of blood collection bag.
   (b) Mention the different complications of blood transfusion. \(3 \times 5\)
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.  \[2+3+2\]