



RJ-21046

Seat No. _____

Second Year B. Sc. (Sem. IV) Examination

April/May – 2011

Paper No. 401 : Biochemistry

Time : 3 Hours]

[Total Marks : 75

1 Write the principle, mechanism and applications of Ion exchange chromatography. 9

OR

1 Write an account of classification of lipids with one example of each class along with structure. 9

2 Give the experimental evidences that proved DNA is genetic material. 9

OR

2 Explain in detail breakdown of heme with diagram. 9

3 Write short notes on any two of the following : 12

- (a) Affinity chromatography
- (b) Applications of gel electrophoresis
- (c) Vitamin A
- (d) Write in short about the different tests to check purity of fats and oils.

4 Answer briefly any five of the following : 20

- (1) Write advantages of TLC over paper chromatography.
- (2) Write importance of B-mercapto ethanol in SDS PAGE.
- (3) Can we separate carbohydrates by using electrophoresis? If yes than how?
- (4) Write in brief about the biological functions of lipids.
- (5) What is hn RNA and sn RNA?
- (6) Write the physiological functions of Vitamin D.
- (7) What would be the central Dogma for RNA viruses?

- 5 Define any five of the following : 10
- (1) Rf
 - (2) Isoelectric focusing
 - (3) HPLC
 - (4) Fat soluble vitamin
 - (5) Porphyrinogen
 - (6) Hyper chromicity
 - (7) Genome
 - (8) Sphingomyelin.
- 6 Comment/Justify any five of the following : 10
- (1) Ascending is the better than the descending.
 - (2) Sample is first mixed with glycerol and bromophenol blue, before applying it into the sample well in gel electrophoresis.
 - (3) Saturated fatty acid is different than the unsaturated fatty acid.
 - (4) Reichert-Meissel (RM) number has an important significance.
 - (5) All the viruses have RNA as genetic material.
 - (6) What is porphyria and how it can be diagnosed?
 - (7) Double stranded DNA absorbs more 260 nm UV light source than single stranded DNA.
 - (8) Wet beriberi is different than the dry beriberi.
- 7 Answer the following questions in one line : 5
- (1) Which factors affecting electrophoretic mobility?
 - (2) What do you mean by isoelectric point?
 - (3) Give the function of bile pigments.
 - (4) Write the functions of B-complex vitamins.
 - (5) What do you mean by the term "Solenoid"?
 - (6) Write the full form of PUSFA.
 - (7) Explain the term "Reverse transcription".
 - (8) What are the applications of GLC?