2014
M.Sc.
1st Semester Examination
BIO-MEDICAL LABORATORY SCIENCE & MANAGEMENT
PAPER—BLM-101
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 Q. No. 1 and any three questions
from the following.

1. Answer any ten of the following : 1x10
   (a) What do you mean by Competitive inhibition in
       enzyme action?
   (b) What do you mean by Km?
   (c) Write Beer's Law.
   (d) Write the name of any one apoptotic marker.
   (e) What do you mean by W/A %?
   (f) Write the range of wave length of U. V. light.
   (g) Show the location of heart.
   (h) What do you mean by point mutation by radiation?
   (i) What is hypoglycaemic shock?
   (j) Write the name of any one marker of cancer.
   (k) What is Pleura?
   (l) Write the names of two non-enzymatic antioxidant.
(m) What is chromane ring?
(n) What is the role of DMT 1?
(o) What do you mean by resolution of a microscopic device?

2. (a) Write the different features of an apoptotic cell.
   (b) Describe the steps of apoptosome formation.
   (c) State differences between intrinsic and extrinsic pathway of apoptosis.

3. (a) Deduce the M-Meauation in enzyme kinetics.
   (b) ‘Km indicates substrate concentration’ — explain it from M-M equation.
   (c) What do you mean by straight line equation of M-M equation?

4. (a) Write the Beer-Lambert’s law.
   (b) State the limitation of the application of that law.
   (c) What precautions you will follow for the OD measurement using spectrophotometer?
   (d) Write the advantages of spectrophotometer over colorimeter.

5. (a) Describe the regulating factors related to iron absorption.
   (b) Why Fe^{2+} is preferred for transportation of iron and how it is transported and stored?

6. (a) Differentiate SEM and TEM with its application.
   (b) Describe how folate-B_{12} shunt is working.
   (c) Describe the parts of nephron.