2014

M.Sc.

3rd Semester Examination

BIOMEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER—BLM-302 (UNIT-19)

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 — I

(Fundamental Clinical Biochemistry)

1. Answer any five questions of the following : 1x5

(a) What is the full form of SDS PAGE?

(b) What is rule of 10?
(c) What is the basic difference between plasma and serum?

(d) Write the names of two biochemical markers of rural disease.

(e) Who obtained Nobel Prize for the invention of partition Chromatography?

(f) Write the name of one enzyme for diagnosis of cardiac disease.

(g) Write the enzyme used for RT—PCR.

(h) Write the wavelength of UV range.

2. (a) Write the different phases of PCR in connection with DNA multiplication.

(b) Write any two applications of PCR in ‘Biomedical Laboratory Science’.

(c) Why real time PCR is preferred over routine PCR? 

4+2+2

Or

(a) What do you mean by double beam spectrophotometer?

(b) State the Beer-Lambert’s law in the connection with the principle of spectrophotometer.

(c) Write the difference between colorimeter and spectrophotometer.

2+3+3
3. (a) Differentiate between TLC and HPLC.
   
   (b) Derive the retention factor with justification of each components of any one types of chromatography

Or

(a) Mention the principle of electrophoresis from the angle of Columb's law.

(b) How the polyacrylamide gels used in SDS-PAGE is polymerized.

(c) Write the role of $\beta$-marcapto ethanol and SDS in PAGE.

Module — II

(*Advanced Clinical Biochemistry*)

4. Answer any five questions from the following : 1x5

   (a) What is kernicterus?

   (b) Write the full form of $\gamma$-GT.

   (c) What is microdiffurian technique?

   (d) What is renal clearance?

   (e) Write the full form of CPK and LDH.

   (f) Write the full form of SGOT and SGPT.

   (g) What do you mean by free acidity?

   (h) Write the full form of SGPT.
5. (a) Describe the mechanism of action of the formation of conjugated bilirubin in the body.
(b) State the biochemical features of Crigle-Najar Syndrome.  
6+2

Or

(a) Write the principle of Inulin clearance test.
(b) Describe one test for the measurement of GFR.
(c) What are the drawbacks of CPK test for diagnosis of cardiac disease? 2+4+2

9. (a) Write the principle of detection of CO toxicity in our body.
(b) Describe the procedure of CO toxicity assessment in qualitative aspect.
(c) How you screen Hg and As toxicity in blood? 2+3+2

Or

(a) Describe the assessment of exocrine part of pancreas.
(b) How will you asses the endocrine part of pancreas in our body?
(c) Write in brief about the gastric function test. 2+2+3