2014
M.Sc.
3rd Semester Examination

BIOMEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER—BLM-301 (UNIT-18)

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.

Module — 1

(Cytotechnology & Cytogenetics)

Answer all questions.

1. Answer any five questions of the following : $1 \times 5$

(a) Write the full form of PAP technique;
(b) Write the full form of ISEL;
(c) What do you mean by basic dye;
(d) What is progressive staining?

(Turn Over)
(e) Write the strength of formaldehyde available in market;

(f) What is karyotype?

(g) What is the meaning of caspase?

(h) What do you mean by secondary antibody?

2. (a) Write the difference between FACA and FACS.

(b) State the application of FACS in 'Bio-Medical Lab Science'.

(c) Write the working principle of 'flow cytometry'.

3+2+3

Or

(a) Write the principle of detection of disease marker along the cell surface by immuno fluorescence cytotechnology.

(b) Describe the steps followed in ABC technique for the detection of cell marker.

(c) Why immunofluorescence is preferred over immuno enzymatic techniques in cytology?

3+3+2

3. (a) Write the principle of 'TUNEL' study.

(b) State the steps adopted in 'TUNEL' study.

(c) Write the application of 'TUNEL' study in 'bio-Med. Lab. Sci.'

2+3+2

C/15/M.Sc./3rd Seme./BLM-301(U-18) (Continued)
(a) State in brief the chromosome staining technique.
(b) Write the cytogenetical basis of inborn error of Metabolism.
(c) Write the application of cell fractionation in ‘Bio-Med Lab-Sci’.  

Module — II

(Hystotechnolozy)

Answer all questions.

4. Answer any five questions from the following:  
   (a) Write any one function of clearing agent.
   (b) When frozen section is used in histology?
   (c) Why periodic acid is used in PAS stain?
   (d) Write the application of ‘Feulgen reaction’ in histology.
   (e) What do you mean by infiltration?
   (f) Write the application of ‘Alcian Blue stain in histology’.
   (g) What is graded dehydration?
   (h) What do you mean by routine fixative?

5. (a) State the principle of ‘Feulgen reaction’.
   (b) Write the procedure for the preparation of PAS stain.
   (c) Write the process of protein fixation in tissue.  

C/15/M.Sc./3rd Seme./BLM–301(U–18)  
(Turn Over)
Or

(a) Write any one process of decalcification of bone in histology laboratory.
(b) How will you confirm the completion of decalcification process of bone?
(c) Write the Biactives of honing of microtome knife.

3+3+2

6. (a) Write the protocol of haemotoxyylene solution preparation in histological laboratory.
(b) What do you mean by deformalinization?
(c) What are the draw backs of Zenker fixative for tissue fixation and how will you rectifyed.

3+2+(1+1)

Or

(a) Describe in brief about 'Ninhydrine-Schiff' method for amino group detection in tissue section.
(b) Write short about:
   'Alcian Blue' staining for disulfide linkage.

3+4