

2012

M.Sc.

3rd Semester Examination

BIO-MEDICAL LABORATORY SCIENCE & 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-I

(Cytotechnology and Cytogenetics)

1. Answer any five of the following : 1×5
- (a) What do you mean by point mutation?
 - (b) Write the full form of FISH.
 - (c) What is regressive staining?
 - (d) Write the full form of PAP in immuno histotechnology.
 - (e) Write the full form of ISNT.
 - (f) State one application of FACS.
 - (g) What do you mean by 'Numerical apperature' of a microscope?
 - (h) Write the name of one cancer marker used in cytotechnology.

(Turn Over)

2. (a) Differentiate between apoptosis and necrosis.
(b) How do you diagnose apoptotic cells by immunocytological way?
(c) Write the steps adopted in ISNT. 3+2+3

Or

- (a) What do you mean by 'Museum technology' ?
(b) State the importances of 'Museum technology' in cytotechnology.
(c) Write the cytogenetical basis of inborn error of metabolism. 1+4+3
3. (a) Write the principle of 'Fuelegen' staining.
(b) State the procedure and application of 'Fuelegen' staining.
(c) Write the precaution of 'Fuelegen' staining. 2+(3+1)+1

Or

- (a) What do you mean by DNA probe ?
(b) Write the steps adopted for diagnosis of microbial infection using DNA-probe technology.
(c) What do you mean by non-acceptable mutation ?

Module-II*(Histotechnology)*

4. Answer any five questions of the following : 1×5

- (a) Write the name of any two chemical bonds responsible for binding of dye molecule with target molecule of the tissue.
- (b) Why Sudan-IV is known as stain?
- (c) What do you mean by neutral formation?
- (d) Write one objective of honing.
- (e) Write any two limitations about the use of automated tissue processor.
- (f) State any one importance of clearing agent in tissue processing.
- (g) Write the name of any two dehydrating agents in tissue processing?
- (h) What do you mean by basic dye?

5. (a) Write the classification of Phosphatases.

- (b) State the histochemical method for the quantification of 'Alkaline Phosphatase' by 'Gomery' method.
- (c) What do you mean by counter staining? 2+4+2

Or

- (a) Write the principle of 'Alizarin-Real' staining for semiquantification of calcium in tissue.
- (b) State the steps followed in 'Alizarin-Real' staining.
- (c) Write in brief the role of calcium in cell. 2+4+2

6. (a) How do you prepare 'Schiff reagent'?
- (b) Write the process of haemotoxylene preparation.
- (c) State why periodic acid is selected for oxidation process in 'PAS' staining. 2+3+2

Or

- (a) How do you confirm the completion of decalcification process in processed tissue in histotechnology?
- (b) Write the composition of 'Carnoy' fixative and state the importances of this fixative.
- (c) What do you mean by 'infiltration and impregnation'? 2+(1+2)+(1+1)
-