

2010**M.Sc.****3rd Semester Examination****BIO-MEDICAL LABORATORY SCIENCE & MANAGEMENT****PAPER—IX (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 chromogen ?
 - (b) Define progressive staining.
 - (c) Write the full form of TUNEL.
 - (d) Define fluorescence.
 - (e) Write the features of an ideal smear.
 - (f) What do you mean by Caspase ?
 - (g) Write any two advantages of automated tissue stainer.
 - (h) State application of crystal violet staining.

(Turn Over)

2. (a) Write the principle of cell flowmetry.
(b) Describe the working procedure of cell flowmetry.
(c) Write the application of cell flowmetry. 2+4+2

Or

- (a) Write the principle for the detection of cell surface antigen by immunoentymatic technique.
(b) State the steps adopted in peroxidase-anti-peroxidase technique.
(c) Mention common health hazards in cytology laboratory. 3+3+2

3. (a) State the principle of ISEL.
(b) Write the fundamental working steps followed in ISEL.
(c) Write the application of ISEL in 'Bio-Medical Lab. Science' 2+3+2

Or

- (a) State the working principle of Phase Contrast Microscope.
(b) Write any two applications of this microscope.
(c) What are the characteristic features of malignant epithelial cells. 2+3+2

Module-II
(Histotechnology)

4. Answer any five questions : 1×5
- (a) Write the importance of stropping.
 - (b) When cryo cut sections are used in histology?
 - (c) Write the full forms of ZN and PAS staining.
 - (d) Write the composition of carnoy fixative.
 - (e) Write the names of any two dehydrating agents used in histology.
 - (f) What do you mean by impregnation?
 - (g) Write the application of trichrome staining.
 - (h) Mention common laboratory equipments of histology lab..
5. (a) What are the objectives of tissue fixation?
(b) Why tissue dehydration is essential for paraffin block preparation.
(c) Write the importances of honing.

3+3+2

Or

- (a) Write the process of haematoxylin stain preparation.
- (b) State the steps adopted in trichrome staining.
- (c) Write the application of PAP staining.

3+3+2

6. (a) What is histochemistry ?
- (b) Describe the steps adopted for the detection of acid phosphatase activity in histotechnology.
- (c) Write the application of histochemistry in disease diagnosis. 1+4+2

Or

- (a) Write the fundamental steps adopted for the detection of apoptotic cells in tissue section.
- (b) State the principle of 'Feulgen nuclear reaction' for DNA staining. 4+3
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