

2008

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) Write the principle of Phase Contrast microscope.
 - (b) Write the full form of FISH and GISH.
 - (c) State any two features of an ideal primer used in PCR.
 - (d) What is sandwich immunofluorescence technique used in cytology?
 - (e) Write the full forms of APAAP and ABC techniques.
 - (f) What are the ingredients of Iron-haematoxylin stain?

(Turn Over)

- (g) What are meant by 'Nitro' dye and 'Azo' dye?
(h) What is numerical aperture?

2. (a) Write the full form of TUNEL.
(b) State the procedure of TUNEL for apoptotic cell diagnosis. 1+7

Or

- (a) State any four advantages of APAAP method over peroxidase method.
(b) What do you mean by AR technique? Write the steps for the maximum AR of the tissue sample. 3+(2+3)

3. (a) Write the working principle of transmission fluorescence Microscope with diagram.
(b) State the application of Phase Contrast microscope. (3+2)+2

Or

- (a) Write the working principle and steps of DNA staining using Feulgen reaction.
(b) Write the full forms of ISNT. (2+4)+1

Module-II
(Histotechnology)

4. Answer any five questions : 1×5
- (a) What is meant by secondary fixative.
 - (b) Write any two objectives of clearing agent.
 - (c) State any two application of cryo-cut sections over microtome sections.
 - (d) Write the names of ingredients of carnoy fixative.
 - (e) State any two justifications for the thickness of sections at 5-6 μ prepare in microtome.
 - (f) Write the name of the method used for diagnosis of amino group.
 - (g) Why Sudan-IV is not considered as dye?
 - (h) Write any four features of an ideal section prepared in microtone.
5. (a) Write the chemical basis of protein fixation using fixative.
- (b) Write the steps of Giemsa staining of a tissue section.
- (c) State any two justifications for the section thickness at 15-20 μ in cryo-cut. 3+3+2

Or

- (a) Write the steps of Sudan-IV staining.
 - (b) State the clinical applications of Sudan-IV staining.
 - (c) Write the full form of ZN staining and PAF staining.
- 3+3+2

6. (a) Write the Millon's reaction for tyrosine.

(b) State any one of the hypothesis about the mode of work of trichrome stain. 4+3

Or

(a) Write the principle of Ethyl Green Pyronine method for RNA detection in histotechnology.

(b) State the steps for RNA identification following the above method. 3+4
