

**Bio-Medical Laboratory Science and Management**  
**MSc. Part-II Examination, 2007**

**CYTOTECHNOLOGY, CYTOGENETICS AND  
HISTOTECHNOLOGY**

**PAPER-IX/U-18**

*Full Marks : 50*

*Time : 2 hours*

*The figures in the right-hand margin indicate marks*

*Candidates are required to give their answers in their  
own words as far as practicable*

*Illustrate and answers wherever necessary*

**UNIT-18**

Answer Q. No. 1 and any *four* from the rest

1. Answer any *five* of the following : 2×5
- (a) Why eosin is known as acidic dye?
  - (b) What modification you will perform if you like to stain both the cytoplasm and nuclear part of the cell ?
  - (c) What is color index of a dye ?

- (d) What are the precautions you will follow at the time of embedding ?
- (e) Write the full name of one synthetic **and one natural** mounting media.
- (f) What **is exfoliative** cytology?
- (g) Write the composition of a quick fixative used in cytology.
- (h) What is azo dye?
2. (a) What are the different techniques adopted for sample collection to prepare Gynecological smear and which one is preferred for early diagnosis of Cervical Cancer?
- (b) Write the features of smear of **malignant cells** in respect to normal cells. (4+2)+4
3. (a) Describe the different techniques used for cytological **smear** preparation.
- (b) What **are the criteria of a good smear** ?
- (c) Write the **advantages** of the study **of exfoliative** cytology. 5+2+3
4. (a) Why Sudan III or N is not known as dye?

(b) Write **the basic principle** of fat **staining eosins** Sudan III or N.

(c) Write **the preparation of Sudan III.** 3+3+4

**S. .(a) Describe the fundamentals of dehydrogenase enzyme activity assessment by histochemical technique.**

(b) Write **the clinical significance** of dehydrogenase assay.

(c) **Describe the demerits of Gomori's technique for the assessment** of ACP activity. 5+2+3

6. (a) Define trichrome **staining** with example.

(b) State the **advantages** of trichrome **staining** over H/E staining.

(c) **Discuss the procedure of any standard trichrome staining.** 2+3+5

7. (a) Write the procedure of bone decalcification prior to fixation.

(b) **How will you confirm that decalcification has been completed ?** 6+4