

Q.20 Enumerate different types of microtomes and mention their uses.

Q.21 Explain the procedure for sharpening microtome knives.

Q.22 Discuss the role of cytotechnician in cytology laboratory.

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain in detail the principle, mechanisms, and steps of routine Hematoxylin and Eosin staining.

Q.24 Draw a well labeled diagram of a histokinete (automatic tissue processor) and explain its working, care, and maintenance.

Q.25 Describe the processing of tissue by paraffin technique in detail.

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#### 3rd Sem / DMLT, DMLT ( For Speech and Hearing Impaired)

**Subject : Histopathology / Histopathology & Cytology-I**  
**Histopathology - II**

Time : 3 Hrs.

M.M. : 60

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The process of hardening tissue by removing water and replacing it with paraffin wax is called:

- a) Dehydration                      b) Clearing
- c) Infiltration                        d) Fixation

Q.2 The dye used for nuclear staining in routine histology is:

- a) Eosin                                b) Hematoxylin
- c) Safranin                            d) Methylene blue

Q.3 Which of the following is not a fixative?

- a) Formalin                            b) Zeneker's fluid
- c) Acetone                              d) Xylene

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Q.4 The process of sharpening a microtome knife on a leather strop is known as:

- a) Honing                      b) Stropping
- c) Polishing                  d) Grinding

Q.5 PAP stain is commonly used for:

- a) Bone marrow              b) Cytological smears
- c) Muscle tissue              d) Nervous tissue

Q.6 The main component responsible for metachromasia in staining is:

- a) Mordant
- b) Dyes with basic radicals
- c) Acidic mucopolysaccharides
- d) Fixative

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 The process of decomposition of body tissue by its own enzymes after death is called \_\_\_\_\_.

Q.8 The medium used for embedding tissue in routine histological processing is \_\_\_\_\_.

Q.9 The instrument used to cut thin sections of tissue is called \_\_\_\_\_.

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Q.10 The progressive and regressive types are related to \_\_\_\_\_ techniques.

Q.11 The enzyme activity in tissues is best preserved by \_\_\_\_\_ fixation.

Q.12 In exfoliative cytology, the most commonly collected specimen is \_\_\_\_\_.

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Define histology and histopathology. Differentiate between them.

Q.14 Write a note on biopsy and autopsy with examples.

Q.15 Describe the steps of routine staining using Hematoxylin and Eosin.

Q.16 What are fixatives? Classify them with examples.

Q.17 Write the principle and advantages of frozen section technique.

Q.18 What is Metachromasia? Explain its significance in staining.

Q.19 Describe the process of dehydration and clearing in paraffin technique.

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