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DEPARTMENT: MEDICAL LABORATORY SCIENCE.

COURSE CODE: MLS 202.

COURSE TITLE: INTRODUCTION TO MEDICAL LABORATORY SCIENCE II

ASSIGNMENT ON INTRODUCTION TO HISTOPATHOLOGY

Answers

1. **Purpose of Fixation**

Fixation is the basis of histological technique which involves the application of chemical fixatives on a specimen to prevent post – mortem changes which may be putrefactive or autolytic in nature.

Fixation has many purposes in the laboratory, they include;

1) It preserves the shape, structure, relationship and chemical constituents of tissues and cells.

2) It keeps the tissue close to life as much as possible.

3) The use of fixatives on protein elements of cells and tissues ensures that structural stabilisation is achieved.

4) In addition to preserving tissue and cells, the fixing fluid renders the tissues insensitive to any subsequent treatment which may be necessary for production of final slide or specimen.

1. **Compound Fixatives and composition**

Compound fixatives are solutions resulting from the mixing of two or more simple fixatives. They include;

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| Compound Fixatives | Composition |
| 1) 10% Formol-Saline. | Formaldehyde, 40%  Sodium chloride  Distilled water |
| 2) Zenker’s solution. | Mercuric chloride  Potassium dichromatic  Sodium sulphate (optional)  Distilled water |
| 3) Glutaraldehyde fixatives. | 0.2M Sodium cacodylate  Stock 25% glutaraldehyde  Distilled water |
| 4) Flemming’s fluid | Chromic acid, 1%  Aqueous osmium tetroxide,2%  Glacial acetic acid |
| 5) Carnoy’s fluid | Absolute alcohol  Chloroform  Glacial acetic acid |