

- c) PAS Stain
 (x) Which type of epithelial tissue is commonly found in the urinary bladder and undergoes changes in shape when stretched?
 a) Simple columnar
 b) Simple cuboidal
 c) Simple squamous
 d) Transitional epithelium
- (xi) What is the purpose of fixation in histological tissue preparation?
 a) To dehydrate the tissue and make it transparent for microscopy
 b) To infiltrate the tissue with embedding material for structural support
 c) To cross-link proteins and inactivate degrading enzymes while retaining tissue characteristics for staining
 d) To replace water in the tissue with alcohol for preservation
- (xii) Which type of antibodies are commonly used as primary antibodies in immune cytochemistry assays?
 a) Enzyme-linked antibodies
 b) Fluorescent antibodies
 c) Complement antibodies
 d) Agglutination antibodies
- (xiii) Which fluorescent dye is commonly used to label nuclei in immunofluorescence staining in immune cytochemistry?
 a) Hematoxylin
 b) Eosin
 c) DAPI (4,6-diamidino-2-phenylindole)
 d) Giemsa stain
- (xiv) Which type of antibody is typically used as the secondary antibody in immunohistochemistry (IHC) for immune cytochemistry?
 a) Monoclonal antibody
 b) Polyclonal antibody
 c) Conjugated antibody
 d) Antigen-binding antibody
- (xv) Which of the following is a common cause of ascitic fluid accumulation?
 a) Pericarditis
 b) Pleuritis
 c) Liver cirrhosis
 d) Pulmonary embolism

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain the importance of polyclonal antibodies in Immunocytochemistry. (3)
3. Describe the role of fixatives in tissue processing. (3)
4. Identify the solutions required for PAS stain and describe their composition. (3)
5. Identify the difference between direct and indirect IHC. (3)
6. Compare between anisocytosis and anisonucleosis. (3)

OR

Illustrate the advantages of automation in cytology. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Compare and contrast the histological features of epithelial tissue with connective tissue. (5)
8. What is dysplastic cell? Briefly illustrate characteristics of dysplastic cell. (5)
9. State the different types of fixative used in the histology technique and explain their application on tissue fixation. (5)
10. What are the key steps involved in receiving biopsy specimens in a histopathology laboratory? (5)
11. Explain the functions and selection criteria for an ideal mounting medium in histotechnology. (5)
12. Analyze the concept of exfoliative cytology, evaluate its practical applications. (5)

OR

Evaluate the advantages and limitations of using monoclonal versus polyclonal antibodies in IHC for diagnostic pathology. (5)