

M.Sc. 3rd Semester Examination, 2024
BIO-MEDICAL LABORATORY SCIENCE
& MANAGEMENT

PAPER – BML-303

Full Marks : 50

Time : 2 hours

Answer all questions

The figures in the right hand margin indicate marks

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

GROUP – A

Answer any four questions from the following :

2 × 4

- 1. Define infiltration and impregnation in tissue processing.**

(Turn Over)

(2)

2. What are the objectives of tissue dehydration.
3. What is the primary purpose of papanicolaou stain ?
4. State the criteria of an ideal fixative.
5. Write the full forms of ABC and PAP followed in immuno histo technology.
6. What do you mean by false positive and false negative tests ?

GROUP – B

Answer any **four** questions from the following :

4 × 4

7. Discuss the steps followed in PAS reaction for detection of PAS positive material in supplied tissue section.
8. Write the steps of hematoxylin preparation.

(3)

9. Discuss the tissue dehydration technique. How will you prepare 200ml of 70% alcohol using 50% and 80% alcohol. 3 + 2
10. Discuss the importance of tissue clearing during tissue processing. What do you mean by impregnation. 3 + 2
11. "Pre disease diagnosis is confirmed by immunohistochemistry rather than histology and histochemistry" – Justify.
12. What are the key component of papanicolaon staing procedure ? What is alum hematoxylin ? 3 + 1

GROUP – C

Answer any two questions from the following :

8 × 2

13. Discuss the PAP technique for disease marker identification. Write its merits. 6 + 2

- 14.** Describe the steps adopted for PAS preparation. What is antigen retrieval in immunohistochemistry ? 6 + 2
- 15.** What is immunohistochemistry ? How does it differ from other staining ? What are the main applications of immunohistochemistry in clinical diagnosis ? What factors affect the accuracy and reliability of an immunohistochemistry test ? (2 + 1) + 2 + 3
- 16.** Write the composition of quick fixative. Write the principle of hematoxylin staining. State the significance of HRP or ALP enzyme in immunohistochemistry. What is the blocking steps in IHC technique ? 2 + 2 + 2 + 2

[Internal Assessment — 10 Marks]
