



UNIVERSITY OF JAFFNA, SRI LANKA

FACULTY OF ALLIED HEALTH SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION IN B.Sc. Hons (MLS) - 2022

MLSCH 3135 CLINICAL HISTOTECHNOLOGY

PAPER II

DATE: 08.01.2024

TIME: 2½ Hours

ANSWER ALL SIX QUESTIONS

- 01.
- 1.1. Define fixation in histotechnology. (10 marks)
 - 1.2. List four (04) factors which affect the tissue fixation. (20 marks)
 - 1.3. List the properties of an ideal fixative. (20 marks)
 - 1.4. Briefly discuss the effects of excessive and incomplete decalcification (20 marks)
 - 1.5. Briefly describe the examination methods to determine the adequacy of decalcification (30 marks)
- 02.
- 2.1 List the steps in tissue processing. (10 marks)
 - 2.2 Briefly describe each step you mentioned in 2.1. (40 marks)
 - 2.3 List the four (04) factors which influence the rate of tissue processing. (20 marks)
 - 2.4 Briefly describe the advantages of using an automated tissue processor. (30 marks)
- 03.
- 3.1 Mention the purpose of tissue embedding. (10 marks)
 - 3.2 List four (04) embedding media other than paraffin wax used in histopathology. (20 marks)
 - 3.3 Specify three (03) common errors in embedding and give two (02) remedies to overcome each specified error. (30 marks)
 - 3.4 Discuss the problems encountered by sub-optimal embedding. (40 marks)
- 04.
- 4.1 Name five (05) different types of microtomes used in histopathology. (10 marks)
 - 4.2 Give five (05) advantages and five (05) disadvantages of Rotary microtomes over other types of microtomes. (50 marks)
 - 4.3 Mention two (02) reasons and two (02) remedies for each of the following errors in section cutting.
 - 4.3.1 Presence of vertical lines on sections. (10 marks)
 - 4.3.2 Folds present on sections (10 marks)
 - 4.3.3 Poor adherence of sections on slides (10 marks)
 - 4.3.4 Over expanded sections (10 marks)

- 05.
- 5.1 Write a note on monoclonal antibodies. (30 marks)
 - 5.2 List four (04) applications of Immunohistochemistry. (20 marks)
 - 5.3 Write the principles of the following special stains used in histopathology.
 - 5.3.1 Periodic Acid Schiff stain (PAS) (10 marks)
 - 5.3.2 Gomori's Reticulin Stain (10 marks)
 - 5.4 Write the principles of Haematoxylin and Eosin (H & E) Staining. (30 marks)
- 06.
- 6.1 List five (05) fluid specimens received in histopathology laboratory for cytology (20 marks)
 - 6.2 List five (05) advantages of cell block preparations. (20 marks)
 - 6.3 Make a brief note on imprint cytology. (30 marks)
 - 6.4 State six (06) advantages of Fine needle aspiration cytology (FNAC). (30 marks)