



The West Bengal University of Health Sciences  
2nd BMLT February - March, 2023 Examination

Subject : Histopathology & Cytotechnology

Time: 3 hrs.

Full Marks: 100

Attempt all questions

1. Tick the correct answer : 20 x 1
- a) Which one in the best microtome knife?  
i) Non-disposable. ii) Disposable. iii) Diamond. iv) All are equally good.
- b) Aqueous mountant is used to mount :  
i) Frozen Section. ii) Paraffin Section. iii) Hematoxylin Section. iv) Cytology smear.
- c) In Van Gieson stain, muscle stains :  
i) Red colour. ii) Yellow colour. iii) Deep Blue colour. iv) Black colour.
- d) Reagent required for Perl's stain :  
i) Potassium chloride. ii) Potassium cyanide.  
iii) Potassium Ferricyanide. iv) Potassium Ferrocyanide.
- e) Ripening of Hematoxylin are :  
i) Reduction of Hematoxylin. ii) Conversion of hematin to hemotoxylin.  
iii) Both are correct. iv) Both are incorrect.
- f) Ideal thickening of paraffin section :  
i) 3-4 micron. ii) 1-2 micron. iii) 5-6 micron. iv) 7-8 micron.
- g) Exchange of Oxygen (O<sub>2</sub>) and Carbon di Oxide (CO<sub>2</sub>) gas takes place in :  
i) Liver. ii) Heart. iii) Kidney. iv) Alveoli.
- h) In histological tissue processing autolysis can be prevented by using :  
i) Fixation. ii) Dehydrating agent. iii) Cleansing agent. iv) Mounting medium.
- i) Alcohol fixation is required for all except :  
i) MGG. ii) Leishman. iii) PAS. iv) Giemsa.
- j) Blueing is related to :  
i) Staining. ii) Fixation. iii) Dehydration. iv) Mordant.
- k) Most commonly used fixative is :  
i) Formaldehyde. ii) Formalin. iii) 10% Buffered Formalin. iv) 40% Buffered Formalin.
- l) In tissue section AFB is stained by :  
i) Hot ZN technique. ii) Cold ZN. iii) Both. iv) None.
- m) Which of the following is not a fixative?  
i) Bouin's fluid. ii) Alcohol. iii) Zenker's fluid. iv) Peritoneal fluid.
- n) TSH is secreted by :  
i) Thyroid. ii) Pituitary. iii) Kidney. iv) Adrenal Gland.
- o) Sudan stain can be used to visualize :  
i) Lipids. ii) Glycoprotein. iii) Mucoprotein. iv) Carbohydrate.
- p) In tissue collagen is stained by :  
i) H&E stain. ii) Masson's Trichrome stain. iii) Von Kossa. iv) None of the above.
- q) Iron is stained by :  
i) PAS stain. ii) Perls stain. iii) Methylene Blue. iv) PAP stain.
- r) Frozen section is used for :  
i) Lipid stain. ii) Immunohistochemistry. iii) Pre-Operative diagnosis. iv) All of the above.
- s) Oxidizing agent is :  
i) Formaldehyde. ii) Methyl Alcohol. iii) Pre-Operative Diagnosis. iv) Acetic Acid.

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- t) For decalcification following is necessary :
- i) Formalin.      ii) Alcohol.      iii) Nitric Acid.      iv) Xylene.
2. Answer the questions briefly : 5 x 2
- a) Cell block.  
 b) Maintenance of microtome knife.  
 c) Honing.  
 d) Receiving of specimen.  
 e) Grossing.
3. Write short notes on *any six* of the following : 6 x 5
- a) Mordant.  
 b) Papanicolaou stain.  
 c) Pigments in tissue section.  
 d) Microtomes and their uses.  
 e) Different freezing media used in cryosection.  
 f) Decalcification in histological section.  
 g) Trichrome stain.  
 h) Preparation of Paraffin block.
4. Answer *any one* of the following :
- a) Define fixatives. What are the characteristics of an ideal fixative? Enumerate different types of fixatives. 2+4+4
- b) What are the different stages of preparation of paraffin embedded tissue? Discuss the stages. 2+8
5. Answer *any two* of the following :
- a) Describe the Standard Operating Procedure in histopathology laboratory. 15
- b) Discuss the disposal of biomedical waste in histopathological laboratory. 15
- c) Discuss the role of computer in histopathology laboratory. 15

