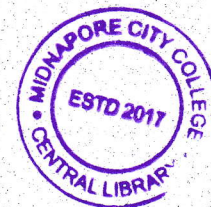


The West Bengal University of Health Sciences
2nd BMLT September, 2023 Examination



Subject : Histopathology & Cytotechnology

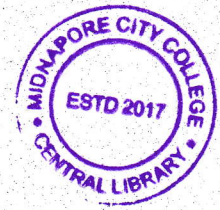
Time: 3 hrs.

Full Marks: 100

Attempt all questions

1. Tick the correct answer : 20 x 1
- a) Active component of hematoxylin is :
 i) Heme. ii) Hematin. iii) Hemoin. iv) Hemoxyn.
- b) Period of abstinence before semen analysis :
 i) 1-2 days. ii) 3-5 days. iii) 7-10 days. iv) 15 days.
- c) All are used as decalcifying agent except :
 i) Formic acid. ii) EDTA solution. iii) Hydrochloric acid. iv) Sodium citrate solution.
- d) Special stain to detect iron in tissue is :
 i) H&E stain. ii) PAS stain. iii) Perl stain. iv) Pap stain.
- e) Which of the following is not a type of microtome?
 i) Slipping. ii) Rotary. iii) Sledge. iv) Rocking.
- f) Rate of penetration of formalin in tissue is :
 i) 1mm/hr. ii) 5mm/hr. iii) 7-10mm/hr. iv) 1.5cm/hr.
- g) Source of fructose in seminal fluid is :
 i) Seminal vesicle. ii) Prostate. iii) Testis. iv) Epididymis.
- h) Light's criteria is used in relation to which fluid :
 i) Joint fluid. ii) Pleural fluid. iii) CSF. iv) Ascitic fluid.
- i) Indications of semen analysis are all except :
 i) Male infertility. ii) Female infertility.
 iii) Effectiveness of vasectomy. iv) Donor selection for artificial insemination.
- j) Not a component of neutral buffered formalin :
 i) Formaldehyde. ii) Phosphate. iii) Water. iv) Alcohol.
- k) Diluting fluid for sperm count is :
 i) 90% Ethanol. ii) Sodium bicarbonate. iii) Turk fluid. iv) Distilled water.
- l) Azoospermia means :
 i) Absent ejaculate. ii) Absent sperm.
 iii) Low sperm count. iv) Abnormal sperm morphology.
- m) All can be used as infiltration media except :
 i) Agar. ii) Resin. iii) Gelatin. iv) Methanol.
- n) Cryostat is used for :
 i) Routine processing. ii) Frozen section.
 iii) Cell block preparation. iv) Cervical smear preparation.
- o) During ripening of hematoxylin which of the following chemical reaction occurs :
 i) Oxidation. ii) Reduction. iii) Cross-linking. iv) Dilution.
- p) PAP smears are fixed in :
 i) Formalin. ii) Alcohol. iii) Phosphate. iv) Paraffin.
- q) Leukhart's mould is made up of :
 i) Bronze. ii) Iron. iii) Brass. iv) Steel.
- r) Reticulin stain is used for :
 i) Reticulocyte. ii) Reticulin fibre. iii) Mucin. iv) Fat.

P. T. O.



- s) What are the components of Zenker's fluid?
i) Mercuric chloride.
iii) Sodium sulphate.
- t) Perl stain contains :
i) Potassium chloride.
iii) Potassium cyanide.
- ii) Potassium dichromate.
iv) All of the above.
- ii) Potassium ferricyanide.
iv) Potassium ferrocyanide.
2. Answer the questions briefly : 5 x 2
- a) Deparaffinization.
b) What is ripening of Hematoxylin?
c) What do you mean by blueing?
d) Components of PAP stain.
e) What is metachromasia?
3. Write short notes on **any six** of the following : 6 x 5
- a) Fixatives used in cytosmear.
b) CSF picture in tuberculous meningitis.
c) Imprint cytology and uses.
d) Neutral buffered formalin.
e) Reticulin stain.
f) Mounting media.
g) Harris hematoxylin.
h) Clearing agents.
4. Answer **any one** of the following :
- a) Write the merits and demerits of formalin as fixative. What are the fixatives of choice for electron microscopy? 8+2
- b) Describe different types of microtomes and their uses. 10
5. Answer **any two** of the following :
- a) How a semen sample is examined in laboratory for routine tests? 15
- b) What are the different decalcifying agents? Describe the process of decalcification. 5+10
- c) Write the principle of immunofluorescence methods. What are the uses of frozen section? How buccal smear is prepared for examination? 5+4+6