

Roll No. 

Answer Sheet No. \_\_\_\_\_

Sig. of Candidate. \_\_\_\_\_

Sig. of Invigilator. \_\_\_\_\_

**ELEMENTARY ANATOMY AND MICROTECHNIQUES HSSC-I****SECTION – A (Marks 10)****Time allowed: 10 Minutes**

**NOTE:** Section-A is compulsory. All parts of this section are to be answered on the question paper itself. It should be completed in the first 10 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

**Q. 1 Circle the correct option i.e. A / B / C / D. Each part carries one mark.**

- (i) What are the number of bones in vertebral column?  
A. 24 B. 31  
C. 42 D. 15
- (ii) The following organelle of the cell involve in the synthesis of protein:  
A. Mitochondria B. Ribosomes  
C. Golgi complex D. Lysosomes
- (iii) Urinary bladder is lined by the following epithelium:  
A. Simple columnar B. Ciliated Columnar  
C. Cuboidal D. Transitional epithelium
- (iv) Which organ of the body receives the hepatic artery?  
A. Heart B. Liver  
C. Spleen D. Lungs
- (v) Which type of the tissue blood is?  
A. Connective tissue B. Elastic Cartilage  
C. Hyaline Cartilage D. Fibrocartilage
- (vi) Which is common fixative among the following?  
A. Glacial acetic acid B. Ethanol  
C. Formalin D. Mercuric chloride
- (vii) Which one is the dehydrating agent among the followings?  
A. Xylene B. Ethanol  
C. Eosin D. Wax
- (viii) Which method is used for the lipid Histochemistry?  
A. Paraffin wax method B. Frozen sectioning  
C. Celloidin method D. Freeze drying method
- (ix) Which one of the following is Eosinophilic?  
A. RBCs B. Nucleus  
C. Ribosomes D. Mitochondria
- (x) The storage temperature of the frozen section is:  
A.  $-90^{\circ}\text{C}$  B.  $-70^{\circ}\text{C}$   
C.  $-120^{\circ}\text{C}$  D.  $-4^{\circ}\text{C}$

**For Examiner's use only:****Total Marks:****10****Marks Obtained:**



# ELEMENTARY ANATOMY AND MICROTECHNIQUES HSSC-I

**Time allowed: 2:20 Hours**

**Total Marks Sections B and C: 40**

**NOTE:** Answer any thirteen parts from Section 'B' and any two questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

### SECTION – B (Marks 26)

**Q. 2 Answer any THIRTEEN parts. The answer to each part should not exceed 2 to 5 lines. ( 13 x 2 = 26 )**

- (i) Briefly describe the function of Ribosomes.
- (ii) Write down the four functions of the liver.
- (iii) Write down the anatomy of lungs.
- (iv) Name the types of microtomes used in histopathology lab.
- (v) What are the coronary arteries and where they located?
- (vi) Write down the types of epithelial tissue.
- (vii) Describe the function of aldosterone.
- (viii) Define the fixative and write the function of formalin.
- (ix) Write down the principle of PAS stain.
- (x) Write down the principle of Papanicolaou staining.
- (xi) Define dehydration, name three dehydrating agents.
- (xii) What is the role of xylene in tissue processing?
- (xiii) What is the difference between lipids and carbohydrates?
- (xiv) Write down the three properties of ideal fixative.
- (xv) What do you mean by frozen section and write the advantages of frozen sectioning?
- (xvi) What is the difference between biopsy and autopsy?
- (xvii) Define blueing process.

### SECTION – C (Marks 14)

**Note:** Attempt any TWO questions. All questions carry equal marks.

**(2 x 7 = 14)**

**Q.3** Name the parts of Urinary system, describe the function of Nephron.

**Q.4** Write down the histological examination of adrenal glands.

**Q.5** Define Tissue Processing, name the stages of tissue processing, describe the dehydration step in detail.