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) The organelle termed as processing plant of the cell is _____.

A. Mitochondria B. Lysosomes

C. Golgi bodies D. Centrioles

(ii) The main cells present in loose Areolar connective tissue are _____.

A. Adipocytes B. Fibroblasts

C. Chondroblasts D. Osteoblasts

(iii) Chordae tendinae are present in _____.

A. Liver B. Heart

C. Pancreas D. Spleen

(iv) Which part of the brain is important in Endocrine functioning?

A. Hypothalamus B. Pons

C. Cerebrum D. Cerebellum

(v) Cricoid cartilage is present in _____.

A. Thoracic cage B. Larynx

C. Trachea D. Vertebral column

(vi) Adipose tissue is a type of _____ tissue.

A. Epithelial B. Connective

C. Muscle D. Nervous

(vii) 1% acid water treatment in H / E staining is called _____.

A. Blueing B. Dewaxing

C. Differentiation D. Clearing

(viii) In Histo Lab, Picric Acid is used as _____.

A. Stain B. Differentiator

C. Fixative D. All of these

(ix) To which class of fixatives does Ethanol belong?

A. Aledehyde B. Mercurial

C. Oxidant D. None of these

(x) The most commonly used decalcifying agent is _____.

A. Nitric acid B. Formic acid

C. Acetic acid D. Hydrochloric acid

_____

**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) Why is pancreas called Dual Gland?

(ii) Briefly discuss Hepatic portal system.

(iii) What is the role played by Hypothalamus in the functioning of Pituitary gland?

(iv) How is Pseudostratified epithelium different from stratified epithelium?

(v) Give differences between Right and Left lungs anatomically.

(vi) Name the parts of the respiratory system.

(vii) Write down the microscopic structure of stomach wall.

(viii) Draw a neat and labelled diagram of a multipolar neuron.

(ix) Name the Anatomical parts of large intestine.

(x) What do you mean by reduction division in a cell?

(xi) Define Microtechniques. Give their importance.

(xii) Give any four properties of an Ideal Fixative.

(xiii) Write down the rationale of Dehydration stage in Tissue Processing.

(xiv) Briefly discuss Blueing stage in Haematoxylin-Eosin staining.

(xv) Write down the working principle of Base Sledge Microtome.

(xvi) Briefly discuss Haematoxylin Stain.

(xvii) What is Mounting of Sections?

## SECTION – C (Marks 14)

**Note: Attempt any TWO questions. All questions carry equal marks. (2 x 7 = 14)**

**Q.3** **a.** Write down the Anatomy and Anatomical position of Human Heart.

**b.** Describe Heart-lung blood circulation (Pulmonary Circulation).

**Q.4** Give a comprehensive classification of Epithelial tissues (in Tabular Form).

**Q.5** Write down the procedural steps involved in Haematoxylin-Eosin staining with timings and rationale of each step.