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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 organelles involved in Defence Mechanism of a cell are _____
A. Microtubules B. Lysosomes
C. Centrosome D. Peroxisomes
- (ii) The skeletal muscle cell is _____
A. Anucleate B. Uninucleate
C. Binucleate D. Multinucleate
- (iii) Sertoli Cells are present in _____
A. Spleen B. Lymph node
C. Kidney D. Testis
- (iv) The structural and functional unit of skeletal muscle is _____
A. Sarcosome B. Sarcoplasm
C. Sarcomere D. Sarcolemma
- (v) Which are the Arteries supplying blood to Heart muscle?
A. Carotid B. Coronary
C. Celiac D. Cephalic
- (vi) Tissues become hard and brittle due to prolonged immersion in _____
A. Xylene B. Toluene
C. Chloroform D. Benzene
- (vii) Blueing of sections in H/E staining may be done in _____
A. Alkaline tap water B. 1% Ammonia
C. 1% Lithium Carbonate D. All of these
- (viii) Formic acid, a decalcifying agent, is used in _____ concentration.
A. 5% B. 10%
C. 20% D. 30%
- (ix) What is **NOT TRUE** about Eosin stain?
A. It is a natural stain B. It stains muscle
C. It stains connective tissue fibres D. It is used in 1% concentration
- (x) Which of the following is **NOT** a clearing agent?
A. Xylene B. Petrol
C. Chloroform D. Acetic Acid

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



ELEMENTARY ANATOMY AND MICROTECHNIQUES HSSC-I

21

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

- (i) Briefly describe Anatomical position of Human body.
- (ii) Define Cell Cycle. Give its diagram.
- (iii) Write down the salient features of Cervical vertebrae.
- (iv) Insulin is Hypoglycemic in action. What does this statement mean?
- (v) What do you know about Brain Ventricles?
- (vi) Write down the microscopic structure of Appendix.
- (vii) Write down the anatomy and anatomical position of pancreas.
- (viii) Give anatomical differences between Right and Left Kidneys.
- (ix) What is Corpus Luteum?
- (x) Write down the hormonal effects on Blood Calcium levels.
- (xi) The most commonly used fixative in Histopathology Lab is formaldehyde. Why?
- (xii) Define Fixation of tissues. Write down the mechanism of fixation.
- (xiii) Clarify the terms **Basophilia** and **Acidophilia**.
- (xiv) What do you mean by differentiation of sections in H/E staining?
- (xv) Name the Clearing Agents. Write down three merits of Xylene as a clearing agent.
- (xvi) How is the impregnation of tissues different from embedding of tissues?
- (xvii) Write down the merits of Paraffin wax as a supporting medium for tissues.

SECTION – C (Marks 14)

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

(2 x 7 = 14)

- Q.3**
- a. Draw a labelled diagram of Human Respiratory system.
 - b. Give the structure of Trachea.

Q.4 Define Mitosis. Name its stages. How is it different from Meiosis?

Q.5 What are the stages involved in Tissue Processing? Write down the rationale of each stage in detail.