

**M.D. DEGREE EXAMINATIONS**  
**BRANCH XXIII – ANATOMY**  
**PAPER III – HISTOLOGY, NEUROANATOMY AND MUSEUM**  
**TECHNIQUES**  
*Q.P. Code : 202091*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Essay:**

**(2X10=20)**

1. Mention the nuclei, course, relations and distribution of Glossopharyngeal nerve.
2. Describe the microscopic anatomy of uterus and fallopian tube.

**II. Short Questions:**

**(8X5=40)**

1. Zones present in endochondral ossification.
2. Principles of Transmission Electron Microscopy.
3. Microscopic structure of cortex of suprarenal gland
4. Posterior limb of internal capsule
5. Mallory's trichrome stain
6. Oil red O stain for fat
7. Somatotrophs of anterior lobe of pituitary gland
8. Pencillar artery of spleen

**III. Reasoning Out:**

**(4X5=20)**

Each of the following questions has a stem followed by five options. Mention whether the options are TRUE or FALSE and mention the REASON.

1. The jejunum has
  - a) Villi
  - b) Crypts of Leiberkuhn
  - c) Valves of Kerkring
  - d) Muscularis mucosa
  - e) Serous glands in the submucosa
  
2. Astrocytes
  - a) They are star shaped cells
  - b) Their processes frequently end in relation to blood vessels
  - c) Fibrous astrocytes are seen mainly in grey matter
  - d) Helps to maintain the blood brain barrier
  - e) Act as phagocytes
  
3. Fixing of tissues in histology is done to
  - a) Prevent autolysis
  - b) Preserve colour of tissues
  - c) Preserve enzymes
  - d) Prevent putrefaction
  - e) Make tissues rigid

**(PTO)**

4. Microscopic structure of retina

- a) Outer nuclear layer contains the cell bodies and nuclei of rods and cones
- b) Inner nuclear layer contains the cell bodies and nuclei of bipolar neurons
- c) Muller's cells present are supporting cells
- d) Inner limiting membrane is formed by axons of ganglion cells
- e) Amacrine cells are found in the inner nuclear layer

**IV. Very Short Answers:**

**(10X2=20)**

1. Name two types of fibres produced by the fibroblast.
2. Name the layers of the choroid.
3. Name two parts of the gastrointestinal tract that have lymphoid follicles in the lamina propria.
4. What is meant by closed circulation of spleen?
5. Name two supporting cells found in the organ of corti.
6. Name the two cells found in pineal gland.
7. Name the cells found in a taste bud.
8. Name two clearing agents.
9. What is meant by double embedding?
10. Mention two agents used to decalcify bone.

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