**ST.JOSEPH’S UNIVERSITY, BENGALURU -27**

**M.Sc (ZOOLOGY) – II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2023**

**(Examination conducted in May 2023)**

**ZO 8422– HISTOLOGY, HISTOCHEMISTRY AND HISTOPATHOLOGY**

**Time: 2 Hours Max Marks: 50**

**This paper contains two printed pages and four parts**

**NOTE: Draw neat labeled diagram wherever necessary**

**PART-A**

Answer **all the five** questions **5X1 = 5**

1. Mention the role of avidin in immunohistochemistry.
2. Describe the histological structure that is unique to thymus gland.
3. Periodic acid converts1,2 glycol groups into monoaldehyde. True/ false?.
4. Why Aluminum ammonium sulfate is used in the preparation of Hematoxylin stain?.
5. Identify the electron microscopic structure given below and comment on its function.



**PART-B**

Answer **all the five** questions  **5X 2 = 10**

1. Mention the components of Bouin's fluid and Carnoy's fluid.
2. Explain cadherin as a “molecular glue”.
3. How acidic dyes are different from basic dyes?
4. Name five major anatomic divisions of the human brain with corresponding structure/s.
5. Define carcinoma and list out the types with one example each.

**PART-C**

Answer **any three** of the flowing questions **3X 5 = 15**

1. Explain any five factors influencing tissue fixation.
2. Describe the cellular degeneration types in a diseased/necrotic tissue.
3. Explain the principle and mechanism behind localization of nucleic acids by Feulgen technique.
4. Write short notes on the histological classification of breast tumor.
5. Glutaraldehyde is used as primary fixative for electron microscopy. Substantiate the statement and add a note on chemistry of fixation.

**PART-D**

Answer **any two** of the following questions **2X 10 = 20**

1. Give a detailed account on the histological architecture of human ovary.
2. Explain localization of steroid dehydrogenase activity with principle, procedure and utility of the technique.
3. From the histopathological context, compare and contrast malignant and non-malignant tumors.

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