

493/Physiol

UG/4th Sem./PHYSIOL-H-SEC-T-2/24

U.G. 4th Semester Examination - 2024

PHYSIOLOGY

[HONOURS]

Skill Enhancement Course (SEC)

Course Code : PHYSIOL-H-SEC-T-2

(Histopathological Techniques)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any five questions: 2×5=10
 - a) Name different types of microtomes.
 - b) Write the composition of Leishman stain.
 - c) What is the difference between a stain and a dye?
 - d) What is the purpose of fixation while preparing permanent tissue sections?
 - e) State the difference between histology and histopathology.
 - f) Write the composition of Bouin's fluid.
 - g) What is the purpose of dehydration step in tissue preparation for permanent sections?
 - h) What is the function of trichrome staining?

[Turn Over]

2. Answer any two from the following questions:

5×2=10

- a) State the principle of PAS staining. Write the importance of PAS staining. 2+3=5
- b) Write down the procedure of bone marrow smear staining. 5
- c) Write the principle of measurement of the diameter of a megakaryocyte. 5
- d) What is the purpose of using adhesive while preparing permanent tissue sections? Name two commonly used adhesives used for preparing permanent tissue sections. 3+2=5

3. Answer any two from the following questions:

10×2=20

- a) Write the process of staining of a fixed tissue section using hematoxylin-eosin. 10
- b) Briefly discuss the process of alkaline-phosphatase staining. 10
- c) Discuss the process and importance of Acid-fast staining. 5+5=10
- d) State the purpose of cleaning in tissue preparation. Name two clearing agents. State the advantages and disadvantages of using Cedar wood oil as a clearing agent. 3+2+5=10