U.G. 2nd Semester Examination - 2020

PHYSIOLOGY

[GENERIC ELECTIVE]

Course Code : PHYH/GE-T-02

(Instrumentation)

[SUPPLEMENTARY]

[OLD SYLLABUS]

Full Marks : 40 Time : $2\frac{1}{2}$ 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.

GROUP–A

1. Answer any **five** questions: 2×5=10
   a) Define direct ELISA.
   b) What is electrophoresis?
   c) What is Rf value?
   d) Why is fluorescence microscopy useful in cell biology?
   e) What is ultracentrifugation ?
   f) What do youunderstand by stationary phase in chromatography?
   g) What is the basic difference between TLC and HPLC?
   h) What do you mean by resolving power of microscope?

2. Answer any **two** questions. 5×2=10
   a) Write the procedure and uses of paper chromatography. 5
   b) Discuss the procedure of agarose gel electrophoresis. 5
   c) What do you understand by phase-contrast microscopy? Write the purpose of phase-contrast microscopy. 3+2=5
   d) What is immunoblotting? Briefly discuss about different types of blotting techniques. 1+4=5

3. Answer any **two** questions. 10×2=10
   a) Differentiate between simple and compound microscope. Draw and describe the structure of a compound light microscope. 2+8=10
   b) Write a short note on different kind of ELISA. 10
   c) Write the principle and procedure of SDS gel electrophoresis. 3+7=10
   d) Discuss the principle and applications of Electron Microscope. Write the difference between Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM). 4+3+3=10