

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Third Semester)

Branch - **BIOCHEMISTRY**

BIOCHEMICAL TECHNIQUES

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Define indicators.
- 2 When is a solution termed as buffer?
- 3 What is colorimetry?
- 4 Why can't glass cuvettes be used in the U-V regions?
- 5 What is partition coefficient?
- 6 What is retention time and retention volume?
- 7 Define electrophoresis.
- 8 How would you define "RCF"?
- 9 Mention the types of scintillation counter.
- 10 Give examples of four radio isotopes used in biochemistry.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Give an account on the buffer system of blood.
OR
b Explain the relationship between PKa and PH.
- 12 a State and explain Lambert - Beer's law.
OR
b What are the essential components of a spectrophotometer?
- 13 a Discuss about TLC.
OR
b Comment on column chromatography.
- 14 a Explain the principle and techniques involved in agrose gel electrophoresis.
OR
b Give a short account on the different types of rotars in centrifuge.
- 15 a How is autoradiography performed?
OR
b Explain the various units of radioactivity.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Write a short note on the following (a) Hydrogen electrode (b) Glass electrode.
- 17 Discuss the instrumentation of spectro fluorimetry.
- 18 Explain the principle, technique and application of molecular sieve chromatography.
- 19 Outline the scheme for separation of sub cellular organelles.
- 20 Give some examples for the medical sciences application of radioisotopes.