PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Third Semester)

Branch- BIOCHEMISTRY

BIOCHEMICAL TECHNIQUES

: Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (10x2 = 20)

Define pH. Give the pH of Blood.

Give the use of pH indicators.

Define Beer-Lambert's law.

Give the principle of fluorimetry.

Enumerate the principle of chromatography.

State the principle ofHPLC.

Give any two applications of paper electrophoresis.

Define RCF.

What is meant by Radioactive decay?

Give any two biological application of radio isotopes.

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)   .

Give an account of Buffer systems of blood.
OR
Explain the relationship between pKa and pH.

Explain the principle, procedure and applications of colorimetry.
OR
Explain the principle and applications of flame photometer.

Explain the procedure and applications of TLC.
OR
Explain how molecular sieve chromatography is used for separation of compounds'?

What are the factors affecting the mobility of compounds in electrophoresis? List out the materials used in SDS - PAGE for separation of proteins.
OR
Explain the types of centrifuges.

Explain the principle and technique of autoradiography.
OR
Explain the principle and technique of liquid scintillation counters.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 1 0 = 30)

Describe the 'Henderson - Hassel balch' equation and mechanism of action of buffer systems in blood.

Discuss the principle, procedure and applications of Spectrophotometry.

Describe the principle, technique and applications of Column Chromatography.

Describe how the agarose gel electrophoresis is used for separation of nucleic acid?