

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2018  
(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 pH.
- 2 Mention the buffers of blood.
- 3 What is transmittance?
- 4 What is fluorescence?
- 5 List two applications of TLC.
- 6 What is R<sub>f</sub> values?
- 7 Explain the role of SDS in PAGE.
- 8 State the principle of centrifuge.
- 9 Define radioactive decay.
- 10 What are the units of radioactivity?

**SECTION - B (25 Marks)**

Answer **ALL** Questions

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

- 11 a Derive Henderson - Hasselbalch equations.  
OR  
b Write notes on glass electrode.
- 12 a Explain in brief the various components of photo electric colorimeter.  
OR  
b Draw a schematic diagram of flame photometer.
- 13 a Give a brief account on GLC.  
OR  
b Explain the principle and instrumentation of HPLC.
- 14 a Comment on analytical centrifuge.  
OR  
b Explain the factors affecting electrophoresis.
- 15 a Describe GM counter.  
OR  
b Write short notes on liquid scintillation counter.

**SECTION - C (30 Marks)**

Answer any **THREE** Questions

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

- 16 Write briefly on the buffers of the body fluids.
- 17 Write an elaborate note on the principle and technique of colorimeter.
- 18 Explain the principle, technique and application of paper chromatography.
- 19 Describe SDS - PAGE in detail.
- 20 Explain the biological application of radioisotopes.