

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch – **BIOCHEMISTRY**

BIOCHEMICAL TECHNIQUES

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Buffers react with _____ ions.
i) hydrogen, hydroxyl
ii) magnesium, calcium
iii) potassium
iv) sodium
- 2 In photometers, the readings of the specimen are initially obtained in the form of which of the following parameters?
i) Transmittance
ii) Absorption
iii) Wavelengths
iv) Volume
- 3 Chromatography is a physical method that is used to separate and analyse _____
i) Simple mixtures
ii) Complex mixtures
iii) Viscous mixtures
iv) Metals
- 4 If proteins are separated according to their electrophoretic mobility then the type of electrophoresis is:
i) SDS PAGE
ii) Affinity Electrophoresis
iii) Electro focusing
iv) Free flow electrophoresis
- 5 The half-life of a radioisotope is _____
i) half the time taken for complete decay
ii) half the time taken for half the decay
iii) time taken for complete decay
iv) time taken for half the decay

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. State the derivation of Henderson Hassel Balch equation.
OR
b. Describe the uses of indicators in titrimetric reactions.
7. a. Explain the Beer Lambert's law and its applications.
OR
b. Narrate the advantages of spectrophotometer.
8. a. Outline the principle & applications of paper chromatography.
OR
b. State the method of column chromatography.

Cont...

9. a. Summarize the types of centrifuges.
OR
b. Describe the various types of rotors.
10. a. Bring out the radioactive decay.
OR
b. Narrate the applications of radio isotopes in biological sciences.

SECTION -C (30 Marks)

Answer ALL questions
ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a. Discuss the buffer systems of blood.
OR
b. Highlight the silver/silver chloride electrode.
12. a. Outline the components of spectrophotometry.
OR
b. Describe the single cell photoelectric colorimeter.
13. a. Inter the principle and method of TLC.
OR
b. Summarize the principle and applications of GLC.
14. a. Discuss the principle and applications of SDS-PAGE.
OR
b. Highlight the principle and instrumentation of analytical centrifuge.
15. a. Explain the process of autoradiography.
OR
b. Elucidate the detection and measurement of radioactivity by Geiger Muller counter.

Z-Z-Z

END