PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019
(Third Semester)

Branch - **BIOCHEMISTRY**

BIOCHEMICAL TECHNIQUES

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10x1 = 10)

1 Identify the pH value of blood
(i) 6.8 (ii) 7.0
(iii) 7.4 (iv) 9.8

2 What is the mixture of Hemoglobin buffer? _
(i) Hb/HHb _ (ii) HCo_3/H_2Co_3
(iii) H_3PO_4/H_2PO_4 (iv) $H_2PO\sim$ / $HPO_4^{2'}$

3 Which of the following method is most suitable for the estimation of riboflavin
(i) Colorimeter (ii) Spectro phometry
(iii) Spectro fluorimetery (iv) Flame photometery

4 What is the colour of the filter and wavelength selected if a blue coloured solution is developed in photometric techniques?
(i) Red 660 nm (ii) Blue 420 nm
(iii) Green 540 nm (iv) Green 500 nm

5 Choose the solubilizer that disrupt the disulphide bridge
(i) Urea (ii) SDS
(iii) Mercaptoethanol (iv) TEMED

6 What is the trade name for Agrose?
(i) SeohadexG-10 (ii) Sepharose 2B
(iii) Biogel P-2 (iv) Amberlite IR - 45

7 Which of the following is a limiting factors for the electrophoretic run
(i) Temperature (ii) Charge of particle
(iii) Electric field (iv) All the above

8 What is the maximum speed of ultracentrifuge?
(i) 10,000 rpm (ii) 25,000 rpm
(iii) 50,000 rpm (iv) 75,000 rpm

9 Which of the following is a phenomenon of isotopes?
(i) Degradation (ii) Decomposition
(iii) Disintegration (iv) Dissociation

10 Find out the isotope that diagnosed a kidney infection
(i) 133! (ii) 133_{xe}
(iii) 32_{p} (iv) 35_{s}

Cont...

SECTION - B (35 Marks)

Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 7 = 35)

Solve the Henderson Hessel batch equation.

OR

Describe the construction of a glass electrode with the help of a diagram.

Explain the principle, components and applications of Spectroflourimeter.

OR

List out the application of Spectrophotometer in Biochemistry.

Bring out the techniques of paper chromatography.

OR

Explain gas liquid chromatography.

Explain the factors that affecting the electrophoresis.

OR

Describe the types of rotors in brief.

Bring out the techniques of liquid scintillation couting.

OR

Explain the biological applications of isotopes.

SECTION - C (30 Marks)

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

Summarise the buffer system of blood.

Elucidate the principle and instrumentation of flame photometry.

Discuss the principle, method and applications of TLC.

Enumerate different types of centrifuges and their applications.

Discuss the method and applications of autoradiography.

Z-Z-Z END