

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – BIOCHEMISTRY

SUBCELLULAR BIOCHEMISTRY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. What are attached at the polar surface of the lipid membrane?

- (i) Peripheral proteins (ii) Integral protein
(iii) Multi pass proteins (iv) None of the above

2. Which of the following process requires membrane protein?

- (i) Pinocytosis (ii) Exocytosis
(iii) Endocytosis (iv) Receptor mediated endocytosis

3. Which makes Lysosomes as suicidal bags?

- (i) Parasitic activity (ii) Presence of Food vacuole
(iii) Hydrolytic activity (iv) Catalytic activity

4. Identify which of the following is not a enzymes of inner mitochondrial membrane?

- (i) ATP synthetase (ii) Monoamine oxidase
(iii) Respiratory chain enzymes (iv) Succinate Dhase

5. State the major protein present in the gap junction

- (i) Connexons (ii) Spectrin
(iii) Aquaporin (iv) Ankyrin

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Show the difference between Prokaryotic and Eukaryotic cells.

OR

b. Sketch the structure of Animal cell and mention the parts.

7. a. Summarize the mechanism of Symport.

OR

b. Describe the process of facilitated diffusion.

8. a. Sketch the ultra structure of microtubules.

OR

b. Describe the functions of Glyoxysomes.

Cont...

9 a. Bring out the structure and functions of Golgi Bodies.

OR

b. Sketch the structure of nuclear membrane.

10 a. Draw the structure and function of collagen.

OR

b. Write a brief note on Desmosomes.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 a. Discuss the structure and function of Cell wall.

OR

b. Draw the ultra-structure and function of plasma membrane.

12 a Explain the mechanism of Antiport .

OR

b. Describe the mechanism of Phagocytosis.

13 a Outline the structure and functions of Peroxisomes.

OR

b. Write about structure, composition and functions of lysosomes.

14 a Explain the structure and functions of mitochondria.

OR

b Sketch the structure of Endoplasmic reticulum and list its functions.

15 a. Discuss about Cell Adhesion Molecules.

OR

b Describe about Structure and functions of cell junctions.

Z-Z-Z

END