

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022  
(First Semester)

Branch – ZOOLOGY

CELL BIOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Who is proposed by cell theory concept  
(i) Schleiden (ii) Illiam Ast  
(iii) Jenses (iv) Hans
- 2 Which of the following cannot be used to mediate the fusion of plasma membranes of two different cells  
(i) Electric shock (ii) Emulsifier  
(iii) Inactivated viruses (iv) Polyethylene glycol
- 3 Who discovered the organelle nucleus?  
(i) Porter (ii) Robert Brown  
(iii) De Robertis (iv) Nageli
- 4 Fine out the size of chromosome range from  
(i) 0.1 micron to 30 micron (ii) 0.2 micron to 40 micron  
(iii) 04. Micron to 25 micron (iv) 0.02 micron to 10 micron
- 5 How many types of all signalling are there?  
(i) Five (ii) Four  
(iii) Eight (iv) Six

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a) List down the difference between the Prokaryotic and Eukaryotic cells.  
(or)  
b) Bring out the applications of SEM.
- 7 a) Classify the bimolecular leaflet model.  
(or)  
b) Explain about the Structure of peroxisome.
- 8 a) Describe about the structure of endoplasmic reticulum.  
(or)  
b) List down the functions of the centrosome.

Cont...

- 9 a) Describe about the semi conservative method of DNA replication.  
(or)  
b) Summarise the central dogma of protein synthesis.
- 10 a) Describe about the cell surface receptors.  
(or)  
b) Explain about the treatment of cancer.

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a) Discuss the about the mitosis cell division.  
(or)  
b) Enumerate the structure and working principle of TEM.
- 12 a) List down the chemical composition of plasma membrane.  
(or)  
b) Discuss about the structure of ribosomes.
- 13 a) Mitochondria is the respiratory centres of cell – Explain.  
(or)  
b) Analyze the structure and function of Nucleus.
- 14 a) Discuss about the different shapes of chromosomes .  
(or)  
b) Examine the structure of messenger RNA.
- 15 a) Describe about the types of signal receptors.  
(or)  
b) Classify the types of cancers.

Z-Z-Z

END