25ZOU102/ 22ZOU101N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2026
(First Semester)

Branch - **ZOOLOGY**

CELL BIOLOGY

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	The primary source of electrons in an electron microscope is a: a) Tungsten wire filament b) Gold wire filament c) Iron filament d) Bulb	K1	CO1
	2	Which type of cell division results in daughter cells receiving an exact copy of the parent cell's chromosomes? a) Meiosis b) Amitosis c) Mitosis d) Binary fission	K2	CO1
2	3	Plasma membrane consists of- a) A protein, a lipid and a cellulose layer b) Bimolecular lipid layer surrounded by protein layers c) A protein layer between two lipid layers d) A lipid layer between two protein layers	K1	CO2
	4	Which of the following are the functions of lysosomes? a) Autolysis b) Autophagy c) Digestion d) All of the above	K2	CO2
3	5	Endoplasmic reticulum cisternal space is also known as _____ a)Cytoplasm b)Nucleus c)Canals d)Lumen	K1	CO3
	6	Inner mitochondrial membrane has a) cytochrome oxidase complex b) b-c 1 complex c) NADH dehydrogenase complex d) all of the above	K2	CO3
4	7	Who was the first person to observe the chromosomes? a) Fleming b) Waldeyer c) Strasburger d) Hofmeister	K1	CO4
	8	A single strand of mRNA attached to complex of ribosomes is called a) Okazaki fragments b) polymer c) polysome d) polypeptide	K2	CO4
5	9	How many types of cell signalings are there? a) Four b) Five c) Seven d) Eight	K1	CO5
	10	Oncoproteins are derived from which type of gene in normal cells? a) Tumor suppressor genes b) Proto-oncogenes (c-onc) c) Antibiotic resistance genes d) Housekeeping genes	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the structure of Eukaryotic cell.	K2	CO1
		(OR)		
	11.b.	Illustrate the applications of Compound microscope.		
2	12.a.	Difference between the Lattice model and Bimolecular model.	K2	CO2
		(OR)		
	12.b.	Explain the structure of Lysosome.		
3	13.a.	Explain the Chemical composition of Centrosome.	K2	CO3
		(OR)		
	13.b.	*Compare the smooth Endoplasmic reticulum and rough Endoplasmic reticulum.*		
4	14.a.	What is th structure of RNA.	K3	CO4
		(OR)		
	14.b.	Illustrate the chemical structure of DNA.		
5	15.a.	Explain the Tumour suppressor genes.	K3	CO5
		(OR)		
	15.b.	Explain the Apoptosis.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Explain about the cell theory.	K2	CO1
2	17	Discuss about the structure Plasma membrane.	K2	CO2
3	18	Explain about the functions of Nucleus.	K4	CO3
4	19	Compare between the structure of DNA and RNA.	K4	CO4
5	20	Evaluate the functions of oncoproteins.	K5	CO5

Z-Z-Z END