25BCU103 / 22BCU103AN

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(First Semester)

Branch - **BIOCHEMISTRY**

GENERAL 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 causative agent of amoebiasis in humans is: a) *Giardia lamblia* b) *Taenia solium* c) *Entamoeba histolytica* d) *Plasmodium vivax*	K1	CO1
	2	Which body system of cockroach is responsible for excretion? a) Malpighian tubules b) Nephridia c) Kidneys d) Green glands	K2	CO1
2	3	The chromosomal abnormality found in Turner's syndrome is: a) Trisomy 21 b) XO c) XXY d) XY	K1	CO2
	4	Crossing-over occurs during which stage of meiosis? a) Prophase I b) Metaphase I c) Anaphase II d) Telophase I	K2	CO2
3	5	ABO blood group inheritance is an example of: a) Simple dominance b) Multiple alleles c) Epistasis d) Polygenic inheritance	K1	CO3
	6	Extra-chromosomal inheritance is mainly through: a) Mitochondria b) Ribosomes c) Nucleus d) Chromosomes	K2	CO3
4	7	Sickle-cell anemia is caused due to abnormality in: a) Enzyme b) Hemoglobin c) Chromosome d) Antibody	K1	CO4
	8	The Hardy–Weinberg law explains: a) Evolution of species b) Genetic equilibrium c) Chromosomal aberrations d) Gene mutation	K2	CO4
5	9	The biotic component of a pond ecosystem is: a) Water b) Phytoplankton c) Soil d) Light	K1	CO5
	10	Which of the following is a non-renewable resource? a) Forest b) Wildlife c) Water d) Fossil fuels	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.	Describe the morphology and life cycle of *Entamoeba histolytica.*	K2	CO1
		(OR)		
	11.b.	Explain the morphology and digestive system of cockroach.		
2	12.a.	Explain the structure and types of chromosomes with neat diagrams.	K2	CO2
		(OR)		
	12.b.	Discuss chromosomal aberrations with suitable examples.		
3	13.a.	Discuss inheritance of ABO blood groups in humans.	K3	CO2
		(OR)		
	13.b.	Describe the inheritance of colour blindness and hemophilia in man.		
4	14.a.	Discuss inborn errors of metabolism with suitable examples.	K3	CO4
		(OR)		
	14.b.	Explain the causes, symptoms, and genetic basis of sickle-cell anemia.		
5	15.a.	Write an essay on the pond ecosystem.	K4 K4	CO3 CO5
		(OR)		
	15.b.	Discuss water pollution, its causes and control measures.		

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	Discuss in detail the morphology of Shark.	K2	CO1
2	17	Explain the mechanisms of linkage.	K2	CO2
3	18	Describe extra-chromosomal inheritance with examples.	K3	CO2
4	19	Examine the concepts Hardy – Weinberg law with its significance in population genetics.	K4	CO4
5	20	Write an essay on conservation of forest and wildlife.	K5	CO5

Z-Z-Z END