

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025
(First Semester)

Branch – ENVIRONMENTAL SCIENCE

ECOLOGY AND SUSTAINABLE DEVELOPMENT/ENVIRONMENTAL 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	What is the definition of an ecosystem? a) A community of living organisms b) A community of living and non-living components c) A community of plants and animals d) A community of microorganisms	K1	CO1
	2	What is the concept of ecological footprint? a) The impact of human activities on the environment b) The amount of resources consumed by an individual c) The amount of waste generated by an individual d) The carbon footprint of an individual	K2	CO1
2	3	What is the concept of carrying capacity? a) The maximum number of individuals an ecosystem can support b) The minimum number of individuals an ecosystem can support c) The average number of individuals an ecosystem can support d) The total number of individuals an ecosystem can support	K1	CO2
	4	What is the definition of population ecology? a) Study of the interactions between living organisms and their environment b) Study of the structure and function of ecosystems c) Study of the dynamics of populations d) Study of the evolution of species	K2	CO2
3	5	Choose the definition of a biome. a) A large ecosystem characterized by a specific type of vegetation and climate b) A small ecosystem characterized by a specific type of vegetation and climate c) A community of living organisms d) A community of living and non-living components	K1	CO3
	6	What is the definition of biodiversity? a) The variety of different species of plants, animals, and microorganisms b) The variety of different ecosystems c) The variety of different habitats d) The variety of different biomes	K2	CO3
4	7	Define the primary goal of conservation ecology. a) To preserve biodiversity b) To promote sustainable development c) To protect ecosystem services d) To reduce pollution	K1	CO4
	8	Find the definition of sustainable agriculture. a) Agriculture that prioritizes economic growth over environmental protection b) Agriculture that prioritizes environmental protection over economic growth c) Agriculture that uses practices that maintain soil health, conserve water, and promote biodiversity d) Agriculture that ignores the needs of future generations	K2	CO4

Cont...

5	9	What is the primary focus of the Millennium Development Goals (MDGs)? a) Sustainable development and environmental protection b) Poverty reduction and human development c) Economic growth and trade d) Social justice and human rights	K1	CO5
	10	What are the Sustainable Development Goals (SDGs)? a) A set of 8 goals adopted by the United Nations in 2000 b) A set of 17 goals adopted by the United Nations in 2015 c) A set of 12 goals adopted by the United Nations in 2010 d) A set of 20 goals adopted by the United Nations in 2005	K2	CO5

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 and composition of the atmosphere.	K3	CO1
		(OR)		
	11.b.	Discuss the importance of energy flow in ecosystems.		
2	12.a.	Classify the different types of ecological succession.	K4	CO2
		(OR)		
	12.b.	Describe the concept of population growth and explain the factors that influence population size.		
3	13.a.	Evaluate the salient features of Western Ghats.	K4	CO3
		(OR)		
	13.b.	Discuss the importance of estuaries ecosystems.		
4	14.a.	Appraise the various sustainable agriculture practices and its significance on environment.	K5	CO4
		(OR)		
	14.b.	Discuss the importance of Land use policy for India.		
5	15.a.	Assess the role of 3 c's of SDG.	K5	CO5
		(OR)		
	15.b.	Critically analyse the role of public in Chipko movement.		

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	Analyze the importance of understanding ecosystem structure and function in managing natural resources.	K5	CO1
2	17	Discuss the importance of species interactions, including predation, competition, and symbiosis, in shaping the structure and function of ecosystems.	K4	CO2
3	18	Explain the various threats on biodiversity and ecosystem services.	K5	CO3
4	19	Evaluate the environmental degradation and conservation issues with suitable examples.	K5	CO4
5	20	Evaluate the potential strategies and solutions to support the country in achieving the SDGs.	K5	CO5

Z-Z-Z

END