

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(First Semester)

Branch- ENVIRONMENTAL SCIENCE

ECOLOGY AND SUSTAINABLE DEVELOPMENT

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	Which of the following requires maximum energy? (a) Secondary consumer (b) Decomposer (c) Primary consumer (d) Primary producer	K1	CO1
	2	In an ecosystem, the energy flow is always (a) Always unidirectional (b) Always bidirectional (c) In any direction (d) Always down directional	K2	CO1
2	3	Which of the following is not a feature of 'r' selected species? (a) Reproduce quickly (b) The low survival rate of progenies (c) Reproduce a large number of progenies (d) Paternal care	K1	CO2
	4	Which of the following orders of basic processes are involved in succession? (a) Invasion - stabilization - completion and coaction - reaction - nudation (b) Nudation - stabilization - completion and coaction - invasion - reaction (c) Invasion - nudation - completion and coaction - reaction - stabilization (d) Nudation - invasion - completion and coaction - reaction - stabilization	K2	CO2
3	5	For documenting rare and endangered species of animals and plants what is established? (a) Green data Book (b) Blue data book (c) Red data book (d) Census data book	K1	CO3
	6	Which two biomes are the most similar with regard to rainfall? (a) Tundra and taiga (b) Tundra and desert (c) Rain forest and savanna (d) Temperate forest and prairie	K2	CO3
4	7	Which of the following statement is correct about Sustainable agriculture? (a) It focuses on producing long-term crops and livestock without harming the environment. (b) It is a techniques and method that protect the environment, public health, human communities and animal welfare while producing food, fibre, or plant or animal products. (c) Both (a) & (b) (d) Only (a)	K1	CO4
	8	The progress on Sustainable development goals (SDGs) is monitored by NITI Aayog using which index? (a) SDG Development index (b) SDG NITI index (c) SDG India index (d) SDG Progress index	K2	CO4

Cont...

5	9	What was the name of the valley in which the Chipko movement began? (a) Alakananda valley (b) Narmada valley (c) Appiko valley (d) Silent valley	K1	CO5
	10	The Sustainable Development Goals comprises of how many goals and targets? (a) 17 goals and 132 targets (b) 17 goals and 169 targets (c) 15 goals and 123 targets (d) 17 goals and 164 targets	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.	Identify the biotic and abiotic components of an aquatic ecosystem.	K3	CO1
		(OR)		
	11.b.	How to apply the concept of the ecological footprint in the ecosystem management?		
2	12.a.	Organize the difference between allelopathy and parasitism.	K3	CO2
		(OR)		
	12.b.	Construct the impacts of biological invasion on native community.		
3	13.a.	Inspect the unique characteristics of Shola forest.	K4	CO3
		(OR)		
	13.b.	Examine the in-vitro biodiversity conservation techniques and its significance.		
4	14.a.	List out and explain the indicators of sustainable development.	K4	CO4
		(OR)		
	14.b.	Analyze the significance of Sustainable rural and urban planning.		
5	15.a.	Appraise the 5 P's of sustainable development goals.	K5	CO5
		(OR)		
	15.b.	Assess the role of the Save Silent Valley movement in protecting the forest ecosystem.		

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 gaseous biogeochemical cycles and its function in the ecosystem.	K4	CO1
2	17	Inspect the concept of Ecological equivalents and ecological indicators with an example.	K4	CO2
3	18	Examine the Ecosystem services and its importance.	K4	CO3
4	19	Evaluate the merits of sustainable agriculture over conventional agriculture practices with an example.	K5	CO4
5	20	Evaluate the necessity of saving the Sundarbans movement.	K5	CO5

Z-Z-Z END