QP Code: R252G043 | Reg. No | | | | | | | | | | | AY 24

Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET UNIVERSITY)

M.Sc. (Second Semester - Regular) Examinations, July – 2025

24MLSPC12004 – Biodiversity & Evolution

(Life Science)

Time: 3 hrs | Maximum: 60 Marks

Answer ALL questions
(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions	CO #	Blooms Level
a. What do you mean by sexual selection?	CO1	K1
b. Explain keynote species and species richness.	CO3	K2
c. Differentiate between in situ and ex situ conservation.	CO2	K2
d. Explain macro evolution.	CO4	K2
e. Explain genetic drift.	CO5	K2

PART – B **(10 x 5 = 50 Marks)**

Answer ***ALL*** the questions	Marks	CO #	Blooms Level
2. a. Write a short note on the salient features of the Biodiversity Act, 2002 of India.	5	CO2	K2
b. Explain the biotechnological approaches to conserve biodiversity	5	CO2	K4
(OR)			
c. Describe the Chipko Movement as a case study for community-led biodiversity conservation.	5	CO2	K3
d. What are molecular tools in biodiversity studies? How do they help in species identification and conservation planning?	5	CO3	K4
3.a. Write a note on Animal distribution and the factors affected the distribution.	5	CO5	K3
b. Explain the role of biotechnological approaches in biodiversity conservation. Mention cryopreservation as one such method.	5	CO2	K3
(OR)			
c. What is the Shannon-Wiener Index? How does it help in measuring biodiversity?	5	CO1	K3
d. What is the significance of biodiversity? Mention any four ecological or economic roles it plays.	5	CO1	K3
4. What is concept of species? Explain the various concept of species.	2+8	CO4	K3
(OR)			
c. Explain fossils and methods of fossilization.	5	CO5	K3
d. Describe molecular systematics.	5	CO5	K3
5.a. Write a note on Natural Selection.	5	CO4	K3
b. Discuss the divergent evolution giving suitable example.	5	CO4	K3
(OR)			
c. What is DNA barcoding? Discuss the principle and methodology of DNA barcoding and explain its significance in biodiversity and conservation studies.	5	CO3	K4
d. What is speciation? Discuss the various modes of speciation.	5	CO4	K3

6.a.	Discuss the ethical considerations in wildlife conservation.	5	CO3	K4
b.	Discuss the geological time scale with proper description.	5	CO5	K3
	(OR)			
c.	How do molecular tools bridge the gap between conservation and evolutionary biology?	5	CO4	K4
d.	How does natural selection influence allele frequency?	5	CO4	K3

--- End of Paper ---