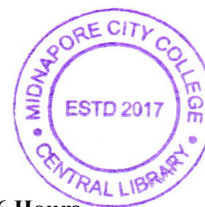


PG CBCS
M.Sc. Semester-IV Examination, 2026
ZOOLOGY
PAPER: ZOO 408B (PRACTICAL)
(ECOLOGY PRACTICAL-II)

**Full Marks: 50****Time: 6 Hours**

1. a. Describe the principle and procedure and estimate the water holding capacity of the soil sample provided. 5
- b. In two adjacent protected areas A and B there are six different species of animals with overlapping habitat range. From the given data calculate the faunal similarity using appropriate biodiversity index. 5

Area	Sambar	Nilgai	Tiger	Asiatic Jackal	Bengal fox	Wild boar
A	30	40	70	0	50	40
B	0	0	30	40	60	40

2. The number of individuals of four species of herbivore populations was studied in ten different areas of a savannah grassland. Calculate from the given data the density, diversity, frequency and abundance of the races. 10

Sl. No.	Name of species	Number of individuals sighted in area									
		A	B	C	D	E	F	G	H	I	J
1	Giraffe	9	6	7	0	0	0	6	11	0	11
2	Wildebeest	0	7	19	0	11	6	8	0	0	13
3	Impala	8	14	0	12	0	0	9	17	7	0
4	Thomson's Gazelle	16	11	0	0	7	9	0	7	0	0

3. In a garden ecosystem there are 6 species of butterflies and 5 species of dragonflies residing in the same area competing for food. The numbers of butterflies and dragonflies are 46, 43, 51, 52, 34, 43 and 65, 61, 57, 54, 49 respectively. Calculate the species richness and distribution pattern of the animals using appropriate biodiversity index. 10
4. Provide and illustrated account of the detailed methods of measuring Tree Height and DBH from a forest stand. 5+5
5. Laboratory note-book. 5
6. Viva voce. 5

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