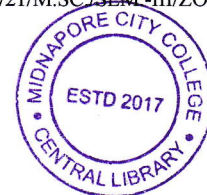


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PG CBCS
M.Sc. Semester-III Examination, 2022
ZOOLOGY
 PAPER: ZOO 395
 (PRACTICAL)

**Full Marks: 50****Time: 6 Hours****Answer all the questions:**

1. a) Dissect out the prothoracic, mesothoracic and metathoracic legs of the given specimen and comment on the modification of the legs. 5
- b) Identify the following specimen and comment on its entomological importance -
 - i) Leaf gall
 - ii) Lac insect. 2.5 x 2=5
2. Calculate the LC_{50} value of 24hrs and 48hrs based on the following data and graphically represent the values and comment on it. 15

Test specimen: *Labeo bata*

Toxicant: Cadmium chloride

Concentration of the toxicant (mg/l)	Number of specimen	Number of specimen dead after 24 hrs.	Number of specimen dead after 48 hrs.
1	20	0	3
2	20	0	5
3	20	4	8
4	20	6	10
5	20	7	14
6	20	8	16
7	20	11	17
8	20	13	19
9	20	16	20
10	20	16	20

3. a) Perform Gram-staining of the supplied A or B. 10
 [Principle(3)+Procedure(2)+Interpretation(2)+Work(3)].
- b) Isolate free-living nitrogen fixing bacteria from the supplied sample A or B by following the serial dilution method and determine CFU and colony morphology. 5
 [Principle(2)+Work(2)+Interpretation(1)].
4. Laboratory Note-book. 5
5. Viva voce 5
