MCC/21/M.SC./SEM.-II/ZOO/1

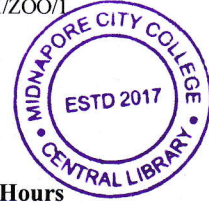# PG CBCS
M.Sc. Semester-II Examination, 2022
DEPARTMENT OF ZOOLOGY
PAPER: ZOO 201

Full Marks: 40   **Time: 2 Hours**

Write the answer for each unit in separate sheet

The figures in the right-hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

ZOO 201.1: BIOSYSTEMATICS
Marks: 20
GROUP-A

1. Answer any two questions: 2×2=4

    a) Define polytypic species and infraspecies.

    b) Define taxon and category with examples.

    c) Cite an example of the use of immunology in systematics.

    d) What is law of priority?

GROUP-B

2. Answer any two questions: 2×4=8

    a) Comment on application of Infrared spectrophotometry in molecular systematics.

    b) Tabulate the differences between r and k selected animals.

    c) How systematics is used in national defence?

    d) Comment on the aims and task of a taxonomist.

GROUP-C

3. Answer any one question: 1×8=8

    a) Discuss the important role of systematics in agriculture and forestry, wildlife management and environmental problems citing suitable examples.

    b) What is biological species concept? Discuss about the application of histochemistry and cytological studies in modern systematics.   3+5

(P.T.O.)

(2)

ZOO 201.2: ECOLOGICAL PRINCIPLES
Marks: 20
GROUP-A
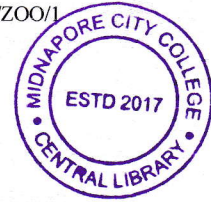
1. Answer any <u>two</u> questions: 2×2=4

    a) What do you mean by ecotone and edge effect?

    b) What is linkage density?

    c) Distinguish between primary and secondary succession.

    d) What is resistance and resilience stability?

GROUP-B

2. Answer any <u>two</u> questions: 2×4=8

    a) Write a short note on Gaia hypothesis.

    b) Explain Bet-Hedging strategy with proper examples.

    c) Write a note on ecological guild.

    d) Briefly discuss Liebig's law of minimum with example.

GROUP-C

3. Answer any <u>one</u> question: 1×8=8

    a) Explain the relationship between a predator and prey in the light of Lotka-Volterra model of interaction.

    b) What are fundamental and realized niches? Explain competitive exclusion principle with experimental evidence and proper diagrams.   3+5

*****