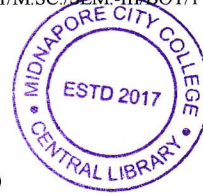


**PG (CBCS)**  
**M.Sc. Semester-III Examination, 2022**  
**BOTANY**  
**PAPER: BOT 303**  
**(ECOLOGY & ENVIRONMENTAL BIOLOGY)**



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.

**UNIT 303.1: ECOLOGY**

Marks: 20

**GROUP-A**

**1. Answer any TWO questions of the following:** **2×2=4**

- a) Differentiate between deep ecology and shallow ecology.
- b) Differentiate between food chain and food web.
- c) What is the relationship between population growth rate and population size?
- d) State the Liebig's law of limiting factor.

**GROUP-B**

**2. Answer any TWO questions of the following:** **4×2=8**

- a) Write down the anatomical and physiological adaptation of halophytes.
- b) Describe different types of ecological pyramids with example.
- c) Write a short note on bioremediation.
- d) Write a short note on detrimental effect of *Eucalyptus* plantation on ecosystem.

**GROUP-C**

**3. Answer any ONE question of the following:** **8×1=8**

- a) What do you mean by age pyramid? Briefly describe different types of age pyramids. Differentiate between r-selection and k- selection. 2+3+3
- b) Define biodiversity. Describe different strategies taken for in-situ conservation of biodiversity. 4+4

(1)

**P.T.O.**

**UNIT: 303.2: ENVIRONMENTAL BIOLOGY**

**Marks: 20**

**GROUP-A**



**1. Answer any TWO questions of the following:**

**2×2=4**

- a) What is stone cancer?
- b) What is Ramsar site?
- c) Differentiate between auto-ecology and synecology.
- d) What is bio-magnification?

**GROUP-B**

**2. Answer any TWO questions of the following:**

**4×2=8**

- a) Differentiate between BOD and COD.
- b) Write down the role of central pollution control board and state pollution control board.
- c) Illustrate about different factors that govern carrying capacity.
- d) Differentiate between classical smog and photochemical smog.

**GROUP-C**

**3. Answer any ONE question of the following:**

**8×1=8**

- a) Schematically describes the pathways of ozone layer formation. Write down the mechanism of Ozone depletion. 4+4
- b) Write down any two bio-indicator of air pollution. Briefly describe any three environmental movements in India. 2+6

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