REF NO.-EX/CE/PC/B/T/415E/2024

B.E.C.E. 4th YEAR EXAMINATION, 2024

1ST SEMESTER

SUBJECT: Ecology and Environmental Management

TIME: THREE HOURS FULL MARKS:100

USE A SEPARATE ANSWER-SCRIPT FOR EACH PART

No. of Questions	Part-I (Full Marks 50)	Marks
	Answer all the questions. Answer should be brief and to the point. Use pencil for any sketch. Assume any relevant data if not provided. Abbreviations have their usual meanings.	
	Section-A (CO-1)	
Q1.(a)	With a neat sketch discuss the different components of ecological model and their relations. Write the drawbacks in the concept of ecological pyramid. Classify ecosystem based on energy sources with an example of each ecosystem.	5+2 +5
(b)	Justify the sentences: (i) Y-shaped model is more realistic and practical working model than single channel energy flow model; (ii) Pyramids of energy provides more suitable method for comparing components of ecosystem (iii) Eutrophication along with thermal stratification is most severe for lentic water system (iv) Ecological web is more realistic than ecological pyramid.	2 × 4
Q2. (a)	With example define: Ecological niche, Biomagnification.	2×2
(b)	With an example of ideal ecosystem describe different components of ecosystem.	6
	Section-B (Related CO2)	
Q3. (a)	Why sedimentary type biogeochemical cycles are known to be well buffer cycle?	2×5
(b)	Differentiate between: Reservoir pool and cycling pool, Nitrification and denitrification in association with nitrogen cycle.	
(c)	Explain how sea bird and fishes play active parts in cycling pool of phosphorus cycle.	
(d)	With example explain how one biogeochemical cycle governs another biogeochemical cycle.	
Q4. (a)	Discuss the importance of emigration and immigration on population ecology.	2
(b)	Differentiate between age structure of India and Japan with neat sketch.	3
(c)	Discuss "Density independent regulation."	3
(d)	Explain carrying capacity in relation with S population growth curve.	2

[Turn over

Ref No.: Ex/CE/5/T/503/2024

B.E. CIVIL ENGINEERING FOURTH YEAR FIRST SEMESTER - 2024
SUBJECT: ECOLOGY AND ENVIRONMENTAL MANAGEMENT

Full Marks: 100

Time : 3 hours **(50 marks for each part)**

Use a separate Answer-Script for each part

No.	Part-II	Marks
	Answer any *five* questions	
1.	a. Describe waste and pollutant and give examples of each. [CO3] b. What are the stipulated timelines for different stages of Environmental Clearance? [CO4]	5+5
2.	a. Draw and explain the significance of the Waste Management Hierarchy in your own words. [CO3] b. What are the full forms of SEIAA and EAC? [CO4]	8+2
3.	a. Give two examples of "treatment of solid waste generating a secondary waste". [CO3] b. Draw the flowchart of the process for obtaining prior Environmental Clearance in India. [CO4]	2+8
4.	a. Explain with examples how waste minimization correlates with sustainable development [CO3] b. Describe Rapid and Comprehensive EIA? [CO4]	5+5
5.	a. Which projects and activities do not undertake Public Consultation? [CO4] b. What is sustainable development? [CO3]	5+5
6.	a. Describe Specific Condition and General Condition of the EIA notification, 2006. [CO4] b. Give two examples of minimising waste before generation? [CO3]	5+5