U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

April 2025 Semester End Make-Up Examinations

Programme: B.E. **Semester: VII**

Branch: Common to all Branches **Duration: 3 hrs.**

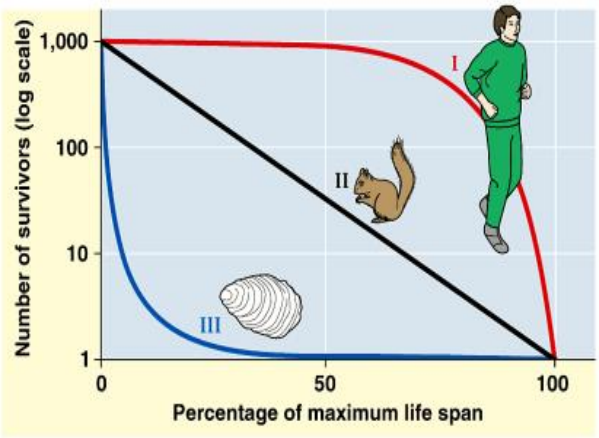
Course Code: 22BT7OEEEM **Max Marks: 100**

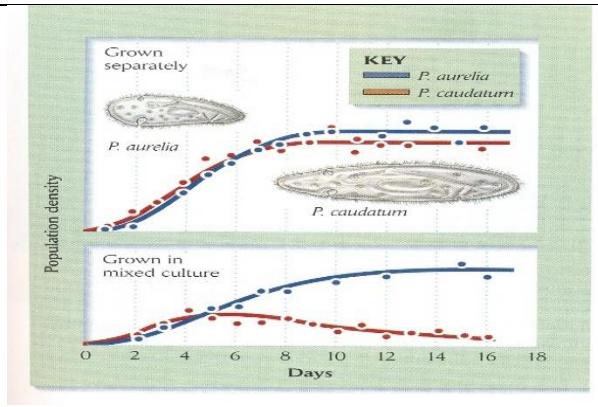
Course: Ecology and Environmental Mangement

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

		UNIT - I	CO	PO	Marks
1	a)	Define ecological succession. Elucidate the process of formation of a climax community	CO1	PO 1	**10**
	b)	Define the Liebig's Law of the Minimum .What are the drawbacks of this Law?	CO1	PO1	**4**
	c)	Explain the different types of ecological pyramids with suitable diagrams	CO1	PO1	**6**
		OR			
2	a)	Define Ecology. Explain the different levels of organization in an ecosystem	CO1	PO1	**6**
	b)	What are biogeochemical cycles? Explain with the help of a diagram the nitrogen cycle.	CO1	PO1	**10**
	c)	Differentiate between Habitat and niche.	CO1	PO1	**4**
		UNIT - II			
3	a)	A community contains the following species: 1. Species A: 413 2. Species B: 196 3. Species C: 693 4. Species D: 254 5. Species E: 320 i) Calculate the Simpson diversity index value for this community. ii) Explain the significance of Simpons diversity index	CO 2	PO 3	**10**

		b)	Negative feedback prevents unlimited population growth." Justify the statement giving suitable examples. Explain the factors (any 2) which contribute to negative feedback.	*CO 2*	*PO 3*	**6**
		c)	 (i) Identify the type of curve shown in the above figure. (ii) List the salient features of the three types of curves shown.	*CO 2*	*PO 3*	**4**
			OR			
	4	a)	Illustrate the Logistic model of population growth. How is growth rate measured?	*CO 2*	*PO 3*	**10**
		b)	What is distribution pattern? Explain with the help of suitable diagrams the different patterns of dispersion of population.	*CO1*	*PO1*	**10**
			UNIT - III			
	5	a)	List any five differences between K selected species and r selected species.	*CO1*	*PO1*	**5**
		b)	Resource partitioning obviates competitive exclusion, allowing the coexistence of several species using the same limiting resource. Justify the statement with a suitable example.	*CO 2*	*PO 3*	**10**
		c)	Identify the type of biological interaction in the following cases. And give examples. (i) The predator kills the prey and eats its flesh. (ii) The predator eats plants or algae. (iii) The predator consumes nutrients from the host, which can decrease the host's fitness or even kill it. (iv) An organism of a species eats another organism of the same species (v) type of interaction between two species where both species are benefitted from the interaction.	*CO1*	*PO1*	**5**

			OR			
	6	a)	Differentiate between Commensalism & Amensalism with suitable examples.	*CO1*	*PO1*	**10**
		b)	 (i) Identify the principle being demonstrated in the above figure. (ii) What are the salient features of this principle	*CO2*	*PO1*	**4**
		c)	Identify the type of relationship which exists in interspecies and is based on exploiting interactions between them. Explain any two types of this relationship.	*CO1*	*PO1*	**6**
			UNIT - IV			
	7	a)	Differentiate between Genetic, Species, and Ecosystem diversity giving suitable examples.	*CO1*	*PO1*	**6**
		b)	What is bio -pesticide? List the types of bio-pesticides.	*CO4*	*PO 1,5,1 2*	**4**
		c)	Name the animals (any two) for whose protection and conservations specific projects have been launched in our country. Explain any one specific project undertaken.	*CO4*	*PO 1,5,1 2*	**10**
			OR			
	8	a)	"Sustainable use of natural resources is an integral part of any sustainable development program" Justify the given statement with suitable examples.	*CO4*	*PO 1,5,1 2*	**4**
		b)	What is Red Data Book? What do you mean by extinct, endangered, vulnerable and rare species?	*CO4*	*PO 1,5,1 2*	**10**
		c)	What are bioindicators? Explain with suitable examples any two.	*CO4*	*PO 1,5,1 2*	**6**

			UNIT - V			
	9	a)	What is Greenhouse effect? Explain the impact of Greenhouse effect on environment.(give any 4)	*CO4*	*PO 1,5,12*	**10**
		b)	Discuss the salient features of (a) Wildlife (Protection) Act, 1972 (b) Forest (Conservation Act), 1980.	*CO4*	*PO 1,5,12*	**10**
			OR			
	10	a)	Explain the impact of industrialization on environment taking "Acid rain" as an example.	*CO4*	*PO 1,5,12*	**10**
		b)	What are the principles of Good Ecological Restoration Practice? Explain any four principles w.r.t human systems.	*CO4*	*PO 1,5,12*	**10**

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