

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M.TECH/PRE-PHD
BRANCH: ESE

SEMESTER : I/NA
SESSION : MO/18

SUBJECT: CE527 ECOLOGY AND ENVIRONMENT

TIME: 3.00 HOURS

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Enlist the causes of growing industrial pollution in the developing countries. [5]
Q.1(b) Explain the chronological development of eutrophication in a stagnant waterbody. [5]
- Q.2(a) Write the factors necessary to calculate the ecological efficiency of an ecosystem [2]
Q.2(b) Differentiate between the two Energy Flow models [3]
Q.2(c) Calculate the IVI of the following data. Mean Basal cover is 10cm^2 [5]

Sample	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
A	26	42	18	42	41	33	29	19
B	2	0	5	6	1	1	4	1
C	41	26	30	29	40	22	35	36
D	5	1	5	4	5	1	4	5

- Q.3(a) Discuss the values of biodiversity with suitable examples [5]
Q.3(b) Categorize the protected areas network of India and their roles in biodiversity conservation [5]
- Q.4(a) Interpret the growth of human population dynamics from J curve to S curve due to carrying capacity [5]
Q.4(b) Construct the hierarchy of Integrated waste management under cleaner production theme [5]
- Q.5(a) Evaluate the usefulness of determining biomagnification and translocation of metals in plants for phytoremediation process [5]
Q.5(b) Discuss the importance of bio adsorbents in tackling environmental problems [5]

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