

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

CLASS: MTECH & PRE-PHD
BRANCH: ESE

SEMESTER : II
SESSION : SP/2023

SUBJECT: CE568 ENVIRONMENTAL TOXICOLOGY

TIME: 3 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)	Describe the principal routes of entry of xenobiotics into the human body with suitable examples	[5] 1	3
Q.1(b)	Explain the quantal dose -response curve and the information derived from it.	[5] 1	3
Q.2(a)	Outline and explain the sources of Emerging Pollutant's toxicity	[5] 2	2
Q.2(b)	Enlist five naturally occurring toxicants in food, their sources and toxic effects.	[5] 2	3
Q.3(a)	Differentiate between the impacts of ecotoxicity on population, community and overall ecosystem	[5] 3	2
Q.3(b)	In a locality the soil was found to be contaminated with 0.56 mg/Kg of Cd. A number of wild herbs were collected from the locality and average Cd concentration was found to be like this Species A- 0.68 mg/Kg Species B - 0.25 mg/Kg Speies C - 1.22 mg.Kg Calculate their BCFs? Which plants can be hyperaccumulators in this case?	[5] 3	3
Q.4(a)	Illustrate the hazard assessment procedure followed for occupational toxicology	[5] 4	3
Q.4(b)	Discuss the toxic responses of the respiratory system	[5] 4	3
Q.5(a)	Summarize the physicochemical properties of contaminants affecting their toxicity.	[5] 5	3
Q.5(b)	If a waterbody is contaminated with antibiotic residues, describe the process to perform the microbiological assay of the water sample for the bacterial species.	[5] 5	4

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