JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

M.Sc-IIIrd Semester (Microbiology)

COURSE CODE (CREDITS): 20MS1MB311 MAX. MARKS: 15

COURSE NAME: ENVIRONMENTAL MICROBIOLOGY

COURSE INSTRUCTORS: Dr. Ashok K. Nadda MAX. TIME: 1 Hour

Note: *All questions are compulsory. Marks are indicated against each question in square brackets.*

Section I

Q No. 1: Very short answer type questions. Each question carrying one mark only.

(a) Enlist the metals majorly present in the Electronic waste. (1 mark)

(b) What are the harmful effects of lead and mercury on the health of human beings? (1 mark)

(c) What do you understand by the process of Lagooning and where it is being used? (1 mark)

(d) Give two examples for each (1 mark)
   1) free living nitrogen fixing prokaryotes
   2) Symbiotic nitrogen fixing prokaryotes

(e) How the ecological niche and microenvironment differs? (1 mark)

Section II
Medium answer type questions

Q No. 2 The noise pollution is one of underrated type of pollution among the society but it has several detrimental effects on the human health. What are the various ailments caused by the noise pollution? (2 marks)

Q No. 3 Illustrate with the help of example various harmful chemicals presents in our home which are being used in modern routine life. What are their harmful effects on the living beings and ecosystem? (2 marks)

Q No. 4 Microorganism plays a very important role in the degradation of harmful pesticide and hydrocarbons in the environment. Give example of those microorganisms that degrade the polychlorinated biphenyls and trichloroethylene. (2marks)

Section III
Long answer type questions

Q No. 5 Considering a large land area contaminated with heavy metal impurities at low concentration which type of bioremediation technique will be most effective? Elaborate the various type of bioremediation techniques used for confronting above given problem. (3 marks)

Q No. 6 Differentiate between Biosparging and bioaugumentation techniques (1 mark)