STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2015 – 2016 & thereafter)

SUBJECT CODE: 15BT/MC/EE54

B. Sc. DEGREE EXAMINATION, NOVEMBER 2019
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR – CORE
PAPER : ECOLOGY AND ENVIRONMENTAL BIOTECHNOLOGY
TIME : 3 HOURS MAX.MARKS:100

SECTION –A (18x1=18 marks)

I. CHOOSE THE CORRECT ANSWER: (10x1= 10)

1) The first stage of EIA is called
a) mitigation b) scoping c)reviewing d) screening e) reporting

2) Phenology refers to
a) floristic composition b)stratification c)periodicity
d)life-forms e)cover

3) If 4 species of *Leucas aspera* occur in 8 sample plots, out of a total of 16 sample plots studied, the abundance of *Leucas aspera* is
a) 0.50 b) 1.00 c) 0.25 d) 0.75 e) 1.50

4) The method used to sample a plant community where there is a gradual change in vegetation and in environmental conditions is the _____ method.
a) quadrat b) transect c) loop d) point e) mapping

5) The increase in the concentration of pesticides within the organism is called
a)biomagnifications b)bioaccumulation c)bioleaching
d) bioremediation e) biocide

6) The maximum permissible concentration of a toxicant which does not cause any perceptible damage to the organism is called
a) MATC b) NOEC c) MTC d) TCCR e) TLC

7) A pycnometer is used for measuring the specific gravity of
a) quartz b) water c) kerosene d) soil e) gasoline

8) Lead accumulates in the
a) kidney b) liver c) bones d) fat e) intestines

9) The base line for Cryptophytes is
a) 26% b) 9% c) 6% d) 46 % e) 13%

10) The Bhopal Gas Tragedy of 1984 was caused by the leakage of
a) MTT b) MFT c) MIC d) MDT e) MTC

II. TRUE/FALSE (4x1=4)

11) The substance detected by the biosensor is called analyte.
12) Rhizofilteration is seen in grass..
13) Dose- Response assessment is the second step in Risk Assessment.
14) EMP is the executive summary of EIA.

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III. MATCH THE FOLLOWING **(4x1=4)**

15) Phanerophytes	6%
16) Chamaephytes	46%
17) Hemicryptophytes	9%
18) Therophytes	26%
	13%

IV. ANSWER ANY SIX IN 50 WORDS: **(6 x 3=18)**

19) Density
20) Loop Method
21) Acute Toxicity
22) Biosensors
23) Stratification
24) Bioaccumulation
25) Risk Characterization
26) Scoping
27) Composite Sampling

SECTION - B

V. ANSWER ANY 4 OUT OF 6 QUESTIONS IN 200 WORDS EACH: **(4 x 6=24)**

28) Give an account of the biotransformation of DDT.
29) Write a short note on the point method of sampling.
30) Explain the phenomenon of biomagnification.
31) Trace the biodegradation of PCP using microbes.
32) Mention the strategies of phytoremediation.
33) Describe environmental quality monitoring of air.

SECTION - C

VII. ANSWER ANY 2 OUT OF 4 QUESTIONS IN 1000 WORDS EACH: **(2 x 20=40)**

34) Discuss the stages of EIA
35) Explain Raunkaier's Biological Spectrum.
36) Describe the process of Risk Assessment
37) Highlight the role of bioindicators in biomonitoring.

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