THIRD SEMESTER P.G. DEGREE EXAMINATION, NOVEMBER 2021

(CCSS)

Environmental Science

ESW 3C 15—BIODIVERSITY AND CONSERVATION

(2019 Admissions)

Time : Three Hours　　　　　　　　　　　　　　　　　　Maximum : 80 Marks

Part A (Essay Type)

Answer any **two** *questions.*
not to exceed 500 words.

1. Write an essay on the ecosystems diversity.

2. Give a detailed account of biodiversity convention and biodiversity act.

3. Write an essay on the threats to biodiversity ?

(2 × 10 = 20 marks)

Part B (Short Essay)

Answer any **eight** *questions.*
not to exceed 250 words.

4. Give an account of Wildlife Protection Act 1972.

5. Write an account of ecotourism.

6. Give short notes on in-vitro conservation.

7. Explain habitat loss ?

8. What are the problems of Wild life Protection in India ?

9. What are the benefits from biodiversity ?

10. Differentiate between endangered species and endemic species.

11. What is ex situ conservation ? Illustrate with examples.

12. Give an account of microbial diversity.

13. What are the reproductive parameters in conservation ?

(8 × 5 = 40 marks)

Turn over

Part C (Short Answer)

Answer any **ten** *questions.*
Each question carries 2 marks.

14. What are seed banks ?

15. What are the zones of biosphere reserves ?

16. What is Fragmentation ?

17. What are objectives of natural parks and wildlife sanctuaries ?

18. What is species diversity ?

19. What is meant by alpha diversity ?

20. What is mean by IUCN Red List ?

21. What is gene bank ?

22. What is Biopiracy ?

23. Expand CITES.

24. What are Mangroves ?

25. What is IPR ?

(10 × 2 = 20 marks)

THIRD SEMESTER P.G. DEGREE EXAMINATION, NOVEMBER 2021

(CCSS)

Environmental Science

ESW 3C 14—ENVIRONMENTAL TOXICOLOGY AND OCCUPATIONAL HEALTH AND SAFETY

(2019 Admissions)

Time : Three Hours   Maximum : 80 Marks

Part A (Essay Type)

Not to exceed 500 words.
Answer any **two** *questions.*

1. Describe biotransformation mechanism.

2. Give a detailed account of environmental carcinogens.

3. Write an essay on occupation health and safety management system.

(2 × 10 = 20 marks)

Part B (Short Essay)

Not to exceed 250 words.
Answer any **eight** *questions.*

4. Write short notes on LC50.

5. Write in detail bio indicators with examples.

6. Describe the toxicology of arsenic.

7. Explain biological monitoring.

8. Give a detailed account of chronic toxicity.

9. Explain catabolism of lipids.

10. Explain respiratory diseases.

11. Give an account of radioactive isotopes.

12. Describe briefly transport of pollutants.

13. Explain statistical concept of toxicity.

(8 × 5 = 40 marks)

Turn over

Part C (Short Answer)

Answer any **ten** *questions.*

14. Explain harmful effects produced by thermal and nuclear power plants.

15. Explain briefly bioassay.

16. What is bio magnification ?

17. Give an account on carcinogens.

18. Briefly explain dose response.

19. What is mutagen ?

20. Explain NOEC.

21. Write a short on biomarkers.

22. Explain toxicity test.

23. Write an account on dosimetry.

24. What is a hazard ?

25. Brief an account on acute toxicity.

(10 × 2 = 20 marks)

THIRD SEMESTER P.G. DEGREE EXAMINATION, NOVEMBER 2021

(CCSS)

Environmental Science

ESW 3C 13—ENVIRONMENTAL ASSESSMENT TOOLS AND MONITORING METHODS

(2019 Admissions)

Time : Three Hours
Maximum : 80 Marks

Part A

*Answer any **two** questions.*
Each question carries 10 marks.

1. Write an essay on EIA notifications and practices in India.

2. Write any two case studies of Environmental Impact Assessment.

3. Explain the applications of computers in environmental sample analysis.

$(2 \times 10 = 20$ marks$)$

Part B

*Answer any **eight** questions.*
Each question carries 5 marks.

4. Explain Environmental management plan.

5. Explain cost benefit analysis.

6. Find the mode 19, 8, 29, 35, 19, 28, 15.

7. Calculate the standard deviation :

Age	F_i
(0, 2)	4
(2, 4)	11
(4, 6)	24
(6, 8)	34
(8, 10)	40

Turn over

8. The table below shows the number of absences, x, in a Calculus course and the final exam grade, y, for 7 students. Find the correlation co-efficient :

x	1	0	2	6	4	3	3
y	95	90	90	55	70	80	85

9. Three unbiased coins are tossed. What is the probability of getting at most two heads ?

10. Calculate the skewness and Kurtosis from the following data :

X	Frequency
0	3
1	5
2	9
3	6
4	9

11. Last year, five randomly selected students took a math aptitude test before they began their statistics course. The Statistics Department has three questions :

    (a) What linear regression equation best predicts statistics performance, based on math aptitude scores ?

    (b) If a student made an 80 on the aptitude test, what grade would we expect her to make in statistics ?

    (c) How well does the regression equation fit the data ?

12. A company makes electric motors. The probability an electric motor is defective is '0.01'. What is the probability that a sample of '300' electric motors will contain exactly '5' defective motors?

13. Explain SPSS software.

                                                                    (8 × 5 = 40 marks)

Part C

Answer any **ten** *questions.*
Each question carries 2 marks.

14. Differentiate WWW and URL.

15. What is habitat modelling in urbanization ?

16. What is DBMS ?

17. What is eco informatics ?

18. Bayes 'formula.

19. Scoping.

20. Base line data collection.

21. Risk assessment.

22. Three major stakeholders of El A.

23. EIS.

24. What is probit analysis ?

25. What is weak law of large number ?

(10 × 2 = 20 marks)