2021/TDC/CBCS/ODD/
EESHCC–301T/391

TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022

ECOLOGY AND ENVIRONMENTAL SCIENCE

(3rd Semester)

Course No. : EESHCC–301T

(Ecology and Ecosystems)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *ten* of the following questions : 2×10=20

1. What is Ecology?

2. What is Biosphere?

3. State Liebig's law of the minimum.

4. What is Biome?

5. What is population growth?

6. What is Keystone species?

7. What is forest ecosystem?

8. Define natality.

9. Write a note on 'Life Table'.

10. Write about *r*-selection.

11. What is biotic components of an ecosystem?

12. What is synecology?

13. What is biogeochemical cycle?

14. Write a note on pyramid of energy with examples.

15. What is ecological niche?

SECTION—B

Answer any *five* of the following questions : 6×5=30

16. Write a note on biosphere. Discuss the major terrestrial biomes found in India. 2+4=6

17. Give an account of autecology and synecology. 3+3=6

18. What is population growth? What are the different types of population growth patterns? 2+4=6

19. What are the limits to population growth? Describe about *K*-selection. 3+3=6

20. Write a note on Forest and Marine Ecosystem. 3+3=6

21. What is species interaction? Mention the different types of interactions between various organisms. 2+4=6

22. Define ecological pyramids. Describe the different types of ecological pyramids with examples. 2+4=6

23. What is ecosystem? Give details on abiotic and biotic components of ecosystem. 2+4=6

24. Briefly discuss the biogeochemical cycle. Write a note on types of biogeochemical cycle. 2+4=6

25. Write notes on water cycle and carbon cycle with proper diagramatic representation. 3+3=6

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TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022

ECOLOGY AND ENVIRONMENTAL SCIENCE

(3rd Semester)

Course No. : EESHCC-302T

(Environmental Biotechnology)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *ten* of the following questions : 2×10=20

1. What is the difference between DNA and RNA?

2. What are the functions of RNA?

3. Write the nitrogen bases present in DNA.

4. Write the functions of amino acids.

5. What are prokaryotes?

6. What are the functions of protein?

7. What is a plasmid?

8. What is cDNA library?

9. What is bacteriophage?

10. What is vermiculture?

11. Define landfill.

12. What is composting?

13. Define biofertilizer.

14. What is biofuel?

15. What is IPM?

SECTION—B

Answer any *five* of the following questions : 6×5=30

16. Describe the structure and function of RNA.

17. Describe the biological significance of different forms of DNA.

18. Describe the different types of amino acids along with their functions.

19. Give a detailed account on prokaryotic and eukaryotic cells.

20. Give a detailed account on cloning and expression vectors with special reference to plasmids.

21. Describe the function of restriction endonuclease.

22. Describe the various strategies of solid waste management.

23. Explain the pathways of heavy metal degradation.

24. Describe the importance of biofertilizer application in environmental management.

25. Outline the importance of integrated pest management in achieving food security.

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EESHCC-303T/393

TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022

ECOLOGY AND ENVIRONMENTAL SCIENCE

(3rd Semester)

Course No. : EESHCC-303T

(Atmosphere and Global Climate Change)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *ten* of the following questions : 2×10=20

1. Write on the composition of atmosphere.

2. Define greenhouse effect.

3. State the different layers of atmosphere.

4. What is El Niño?

5. What is tropical cyclone?

6. Define microclimate.

7. What is climate change?

8. Define atmospheric windows.

9. State the consequences of sea level rise.

10. Define ozone shield.

11. What is Chapman cycle?

12. Name the ozone depleting substances.

13. Write the principle of Montreal Protocol, 1987.

14. Define Kyoto Protocol and mention when it was adopted.

15. What is carbon trading?

SECTION—B

Answer any *five* of the following questions : 6×5=30

16. Describe the evolution and development of earth's atmosphere.

17. Elucidate on the impacts and mitigation measures of climate change.

18. Describe on the development of Indian monsoon and its distribution.

19. Describe the Southern Oscillations with appropriate diagrams.

20. Describe the impacts of climate change on weather patterns.

21. Describe the recent change of global warming.

22. Describe the process of spring time ozone depletion over Antarctica.

23. Elucidate the effects of ozone depletion and its mitigation measures.

24. Describe clean development mechanisms with proper examples.

25. Highlight the salient features of a recent convention on climate change.

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