

**2024/FYUG/EVEN/SEM/
EESDSC-151T/038**

FYUG Even Semester Exam., 2024

ECOLOGY AND ENVIRONMENTAL SCIENCE

(2nd Semester)

Course No. : EESDSC-151T

(Physics and Chemistry of Environment)

Full Marks : 70

Pass Marks : 28

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 meant by black-body radiation?**
- 2. What is Beer-Lambert law?**
- 3. What is the difference between absorption and transmission?**
- 4. What is atomic structure?**

(2)

5. What is pH?
6. What is mole concept?
7. What is smog?
8. Define aerosols.
9. What is ozone layer depletion?
10. What is hardness of water?
11. What is meant by colloidal particles?
12. Write a note on heavy metals in water?
13. What do you mean by soil humus?
14. What is soil composition?
15. Write the importance of phosphorus in soil.

SECTION—B

Answer any *five* of the following questions :

10×5=50

16. Define pressure force, work and energy with suitable examples.
17. What do you mean by absorption and transmission of light? Explain with examples.

(3)

18. Describe in detail about types of chemical bonds.
19. Give a detailed account of periodic properties of elements.
20. Discuss briefly the role of CFCs in ozone depletion.
21. Write a detailed note on photochemical reactions in atmosphere.
22. Write a detailed note on chemical and physical properties of water.
23. Explain the complex formation and chelation with examples.
24. Describe the nitrogen cycle in soil with suitable diagrammatic illustration.
25. Explain inorganic and organic components in soil. Add a short note on their significances.

6+4=10

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