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Name: .....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2016**

(Regular/Supplementary/Improvement)

(CUCSS-PG)

**CC15P ES1 C02 – ENERGY AND ENVIRONMENT**

(Environmental Science)

(2015 Admission Onwards)

Time: Three Hours

Maximum: 36 Weightage

**I. Answer all the questions. Each question carries 1 weightage.**

1. What is spent fuel pool?
2. Explain the principle involved in MHD generator.
3. Point out the limitations of solar cells.
4. Explain the concept of clean coal.
5. Distinguish between nuclear fission and nuclear fusion.
6. Comment on the characteristics of gamma rays.
7. Explain solar constant.
8. Explain biological magnification.
9. What is meant by a photovoltaic system?
10. Comment on nuclear detoxification.
11. Point out the criteria for safe exposure.
12. What are transuranium elements?
13. State the first Law of Thermodynamics.
14. Comment on radiation doses.

**II. Answer any seven questions. Each question carries 2 weightage.**

15. Write an account on nuclear fallout.
16. Mention any four radioactive waste disposal methods.
17. Explain the water degradation by energy production.
18. Comment on radioactive isotopes.
19. Describe the modern techniques involved in energy resource recovery using microbes.
20. Explain the temperature profile of different atmospheric layers.
21. Briefly explain energy management problems.
22. Write short notes on nuclear accidents.
23. Comment on the environmental impact of using biomass as a fuel.
24. Explain the reasons for energy crisis in India, and write a short note on possible alternatives.

**III. Write an essay on any 2 of the following. Each question carries 4 weightage.**

25. Write an essay on multipurpose projects of India and their impact on environment.
26. Write an essay on sustainable energy management.
27. Explain non renewable energy resources.
28. Describe briefly the different types of nuclear reactors with diagram.

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