

**B. Voc. DEGREE EXAMINATION, APRIL 2023**  
**SUSTAINABLE ENERGY MANAGEMENT**  
**SECOND SEMESTER**

**COURSE : MAJOR ELECTIVE**

**PAPER : ENERGY MANAGEMENT AND ENERGY AUDIT**

**TIME : 3 HOURS**

**MAX. MARKS :100**

**SECTION – A**

**ANSWER ALL QUESTIONS**

**(30 x 1 = 30)**

**I. CHOOSE THE CORRECT ANSWER**

1. Energy Management System focus mainly on  
a. Pollution,                      b. Efficiency,                      c. Conservation                      d. Revenue
2. Which of the following is a non-commercial energy source?  
a. Petrol,                      b. Biodiesel,                      c. cow dung                      d. Solar energy
3. Electricity produced from thermal energy (boiling water) is an example of \_\_\_\_\_ Energy source.  
a. Primary Energy,                      b. Secondary Energy,                      c. Thermal Energy,                      d. Useless Energy
4. The objective of Energy Management includes  
a. Minimizing Energy cost,                      b. Minimizing waste,  
c. Minimizing Environmental Degradation,                      d. All of the Above
5. An energy policy does not include  
a. Energy consumption reduction,                      b. Energy Management Principle,  
c. Energy Conservation methods,                      d. Future production projection
6. Energy manager should be well versed with  
a. Manufacturing and processing skills,                      b. Managerial and technical skills,  
c. Technical and marketing skills,                      d. Managerial and commercial skills
7. The various types of the instruments, which require during audit need to be  
a. Easy to carry,                      b. Easy to operate,                      c. Inexpensive,                      d. All.
8. The load curve is the curve showing the \_\_\_\_\_ of the power station with respect to time  
a. huge load,                      b. variation of load,                      c. constant load,                      d. reduction in load
9. An energy audit is an inspection survey and an analysis of energy flows for \_\_\_\_\_ in a building  
a. Energy Economics,                      b. Energy policy,                      c. Energy consumption,                      d. Energy Conservation

10. The \_\_\_\_\_ was enacted to provide for efficient use of energy and its conservation and for matters connected therewith.
- |                                |                            |
|--------------------------------|----------------------------|
| a. Energy questionnaire,       | b. energy principles,      |
| c. energy regulatory policies, | d. energy conservation act |

## II. FILL IN THE BLANKS

11. \_\_\_\_\_ is the main cause of using fossil fuels.
12. \_\_\_\_\_ energy that is produced using the sun, wind, etc., or from crops, rather than using fuels such as oil or coal which cannot be replaced:
13. \_\_\_\_\_ is a software tool that monitors, analyzes, and controls the use of energy in an organization or building for analysis.
14. Increasing the production of clean renewable fuels and other alternative fuel sources increases the Energy \_\_\_\_\_ of a Nation.
15. An energy label discloses the energy \_\_\_\_\_ information of an appliance.
16. The role of an \_\_\_\_\_ in an industry, involves facilitating energy conservation by identifying and implementing various options for saving energy, leading awareness programs, and monitoring energy consumption.
17. Economic analysis essentially entails the evaluation of \_\_\_\_\_ and benefits.

## III. STATE TRUE OR FALSE

18. Primary Energy sources comprises both renewable and non-renewable energy sources like coal, petrol, solar, water.
19. Energy monitoring and targeting is not a management technique
20. Energy Star rating is an Energy labeling program followed in India.
21. India stands on the top of all nations in the world in renewable energy installations.
22. Fossil fuels are the most consumable sources of energy throughout the world.
23. Renewable energies like (Solar, Water, Wind) are the long term energy sources for the world.

## IV. ANSWER IN A SENTENCE

24. Differentiate between Commercial and Noncommercial energy sources.
25. Define - Energy Conservation
26. What are the main parts of a Energy Management Information System
27. What do you understand from a 5-Star rating?
28. List some (two) measures of economic performances.
29. Give the Indian energy scenario.
30. Tell the salient features of Indian Energy Conservation Act.

## SECTION – B

Answer any SIX questions:

(6x5= 30)

31. How are energy sources classified? Explain each classification with examples.
32. List the principles of Energy conservation.
33. Write a short note on Energy Monitoring and Targeting.
34. Discuss about the global energy issues in terms of energy security.

35. How does economics place a vital role in Energy Conservation Schemes?
36. What are the procedures to be followed optimized system selection and design.
37. Draw a load curve and explain it and justify the use of it.
38. Write briefly about the “Energy conservation act”.

### SECTION – C

**Answer any TWO questions:**

**(2x20 = 40)**

39.
  - a. Justify the needs of an Energy Management with Ecological issues that the world is facing due to use of Energy sources.
  - b. Define sustainable energy and tell you which type of energy is going to be the energy of the future.
40. Explain about the Energy Management Information Systems in detail.
41. Discuss about the role of energy managers in industries.
42. Elaborate the need of an Energy audit and tell about the questionnaire used in energy audit.

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