

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI- 86**  
**(For candidates admitted during the academic year 2016 – 17 & thereafter)**

**SUBJECT CODE : 16VS/VE/EM25**

**B. Voc. DEGREE EXAMINATION, APRIL 2018**  
**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**

**I. Choose the correct Answer:**

**(10 X 1 = 10)**

1. Which of the following is not a Primary Energy Source?  
a. Oil                                      b. Natural Gas                                      c. Electricity                                      d. Wood
2. Greenhouse effect refers to increase in  
a. Temperature                                      b. Carbon monoxide                                      c. atmospheric pressure                                      d. carbon dioxide
3. Which is the major energy source to meet the Indian energy demand?  
a. Lignite                                      b. Oil                                      c. Natural gas                                      d. Coal
4. What all components are included in the annual operating cost?  
a. Fuel, maintenance cost and labor                                      b. Interest, taxes, insurance and depreciation  
c. Both (a) and (b)                                      d. None of these.
5. The energy strategies of companies have the principle of  
a. restoring and preserving the environment                                      b. reducing wastes and pollutants  
c. educating the people about energy conservation                                      d. all of these
6. Energy management is a key component of  
a. Environmental management                                      b. Carbon management  
c. Nitrogen management                                      d. Water management
7. The monitor and control of energy management system is done by using  
a. MATLAB                                      b. SCADA                                      c. AUTO – CAED                                      d. All of these
8. The percentage of energy saved at the current rate of use, compared to the reference year rate of use, is called  
a) Energy Utilization                                      b) Energy input                                      c) Energy Performance                                      d) Energy Efficiency
9. An energy policy does not include  
a) Target energy consumption reduction                                      b) Time period for reduction  
c) Declaration of top management commitment                                      d) Future production projection

10. The tool used for performance assessment and logical evaluation of avenues for improvement in Energy management and audit is
- a) Fuel substitution
  - b) Monitoring and verification
  - c) Bench marking
  - d) Energy pricing

**II. Answer all questions:**

**(10 X 2 = 20)**

11. How to reduce energy consumption at home?
12. Brief on energy audit instrument
13. How Ozone Layer depletion affects us?
14. Mention any two implications of Global warming
15. Brief on any one State energy policy
16. What is present global energy scenario?
17. How is Load curve useful in analysis?
18. What is the role of energy managers in industry?
19. Define Energy Security
20. What do you mean by Energy Balance?

**SECTION – B**

**Answer any SIX questions:**

**(6x5= 30)**

21. How to achieve the state of sustenance in energy?
22. Describe about Sensitivity analysis
23. Brief on Sector-wise energy consumption
24. Explain about the procedure for optimized system selection
25. What is the difference between Energy Conservation and Energy Efficiency?
26. What do you mean by Industrial energy management systems?
27. Explain about energy strategies available for the better energy secured nation
28. What are Energy conservation Acts?

**SECTION – C**

**Answer any TWO questions:**

**(2x20 = 40)**

29. Describe about
  - a) The economic reforms in coal, oil, natural gas and electricity sectors.
  - b) How energy pricing is done in India?
30. Explain in detail the methodology for conducting a detailed energy audit.
31. State key elements of Energy monitoring and targeting system. Also discuss the functioning of the components of the EMIS with a neat block diagram
32. Explain about the energy efficiency policies for industry and energy conservation acts available in our country.

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