

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 2019
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)

Choose the correct Answer:

1. The objective for energy management includes
 - a) Minimising energy costs
 - b) Minimising environmental degradation
 - c) Minimising waste
 - d) All the above
2. Greenhouse effect refers to increase in
 - a) Global temperature
 - b) Carbon monoxide
 - c) atmospheric pressure
 - d) Greenery
3. 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
 - e) none of these
4. IFMA stands for
 - a) International Facility Management Association
 - b) Indian Facility Management Association
 - c) International Facility Management Academy
 - d) Indian Facility Management Academy
5. Ratio of maximum demand to connected load is termed as:
 - a) Load factor
 - b) Power factor
 - c) Demand factor
 - d) Form factor
6. Among the following, which is most important for carrying out a material balance
 - a) Temperature of Products
 - b) Mass
 - c) Waste Quantity
 - d) Pressure
7. Which one is the key element for successful Energy Management?
 - a) Top management support
 - b) Planning
 - c) Monitoring
 - d) Training
8. The major source of electrical power generation in India is
 - a) thermal
 - b) Hydel
 - c) Nuclear
 - d) Wind
9. The Ozone layer in the atmosphere acts as an efficient filter for
 - a) X-Rays
 - b) UV-A Rays
 - c) UV-B Rays
 - d) Infra red Rays
10. Energy management is a key component of
 - a) Environmental management
 - b) Carbon management
 - c) Nitrogen management
 - d) Water management

Fill in the blanks:

11. An example for renewable conventional energy source is -----.
12. The benchmarking parameter for air conditioning equipment is -----.
13. A tax credit substantially -----.

14. ----- has the biggest coal reserves.
15. LNG stands for -----.
16. Demand Side Management is required to -----.

State whether true or false:

17. The reduction of utility load primarily during peak demand is known as peak clipping.
18. The top management of an industry should sign the energy audit.
19. If the load current decreases then the power factor will also decrease.
20. Phase advancers are used to improve the power factor of Induction generators.
21. The capital cost of generating equipment, transmission system and distribution system comes under fixed capital.
22. Reactive power is measured in terms of kW.
23. There are 8 steps in an EMIS.

Answer the following:

24. What is economic model of energy?
25. State the significance of capacitance in energy management.
26. What are the advantages of load management?
27. Define pay pack period.
28. What is Smart Metering?
29. What is maximum demand indicator?
30. Define energy audit

SECTION – B

Answer any SIX questions:

(6x5= 30)

31. Explain in detail about Ozone Layer depletion process and its various effects.
32. Explain in detail the difference between Energy Conservation and Energy efficiency and its relevance.
33. Discuss the various phases of energy.
34. Elucidate the various long term Energy Strategy for the Future.
35. What are Standards and Labeling?
36. Write a note on Power prices and generation costs.
37. Discuss the need for energy auditing in an industry.
38. Comment on Smart cities – moving mobility back in time?

SECTION – C

Answer any TWO questions:

(2x20 = 40)

39. Explain all the energy conservation measures possible in lighting system.
40. Describe the energy audit process.
41. What are the various economic lagging indicators?
42. Can India bypass coal for solar- and wind-based electrification?
