

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

SUBJECT CODE : 16VS/VE/EM25

B. Voc. DEGREE EXAMINATION
SUSTAINABLE ENERGY MANAGEMENT
SECOND SEMESTER

REG. NO. : _____

COURSE : MAJOR ELECTIVE

PAPER : ENERGY MANAGEMENT AND ENERGY AUDIT

TIME : 30 MINUTES

MAX. MARKS : 30

SECTION – A
ANSWER ON THE QUESTION PAPER ITSELF
ANSWER ALL QUESTIONS

I. Choose the correct Answer: (10 X 1 = 10)

- Energy management is a key component of
 - Environmental management
 - Carbon management
 - Nitrogen management
 - Water management
- Which is the major energy source to meet the Indian energy demand?
 - Coal
 - Oil
 - Natural gas
 - Lignite
- The essential elements of monitoring and targeting system is
 - Recording
 - Reporting
 - Controlling
 - All the above
- The reduction of utility load primarily during peak demand is known as
 - Peak clipping
 - Load shifting
 - Valley filling
 - MTP analysis
- “The judicious and effective use of energy to maximise profits and enhance competitive positions”. This can be the definition of:
 - Energy conservation
 - Energy management
 - Energy policy
 - Energy Audit
- Replacement of steam based hot water generation by solar system is an example of
 - Matching energy usage to the requirement
 - maximising system efficiency
 - Energy substitution
 - Performance improvement
- The benchmarking parameter for air conditioning equipment is
 - kW/Ton of Refrigeration
 - kW/ kg of refrigerant handled
 - kcal/m³ of chilled water
 - Differential temperature across chiller
- The percentage of energy saved at the current rate of use, compared to the reference year rate of use, is called
 - Energy Utilization
 - Energy Performance
 - Energy Efficiency
 - None
- The three R’s to save the environment are
 - Reserve, Reduce, Recycle
 - Reduce, Recycle, Reuse.
 - Reserve, Reuse, Reduce
 - Reuse, Reserve, Reduce

10. The concept of sustainable development encourages
- (a) Form of growth that meets current basic needs
 - (b) Preservation of the resources for the need of future generation
 - (c) A change in all respects of life
 - (d) All the above

II. Answer in a sentence or two:

(10 X 2 = 20)

11. Name any two non-commercial energy sources.
12. How to ensure sustainability of energy for future?
13. What are the essential elements of monitoring and targeting system?
14. Define Energy Security
15. What do you mean by Energy Balance?
16. What is benchmarking?
17. What are primary sources of energy?
18. Brief on energy pricing.
19. What are economic performance indicators?
20. List any two energy audit instruments and its application

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TIME : 2½ HOURS

MAX. MARKS : 70

SECTION – B

Answer any SIX questions:

(6x5= 30)

1. Explain about Ozone Layer depletion process and its various effects
2. What is the difference between Energy Conservation and Energy efficiency
3. What do you mean by Industrial energy management systems
4. List the strategies for better energy security of the nation?
5. What is load curve in economic analysis?
6. Brief on sensitivity analysis.
7. What are India's energy efficiency policies for industry
8. Explain the methodology for conducting an energy audit

SECTION – C

Answer any TWO questions:

(2x20 = 40)

9. Explain the present Indian & global energy scenario. Comment on the current energy issues
10. State key elements of Energy monitoring and targeting system. Also discuss the functioning of the components of the EMIS with a neat block diagram
11. Discuss about long-term energy strategies available for the better energy secured nation?
12. Explain about the energy conservation acts available globally and in our country.
