

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

**SUBJECT CODE: 16VS/VM/FC16**  
**B.Voc. DEGREE EXAMINATION, NOVEMBER 2018**  
**SUSTAINABLE ENERGY MANAGEMENT**  
**FIRST SEMESTER**

**COURSE : MAJOR CORE**  
**PAPER : FORMS OF ENERGY AND ENERGY CRISIS**  
**TIME : 3 HOURS** **MAX.MARKS: 100**

**SECTION- A**  
**ANSWER ALL QUESTIONS**

**(20 X 1 = 20)**

**CHOOSE THE CORRECT ANSWER:**

1. An example of thermal energy storage material is  
(a) Potassium                      (b) carbon                      (c) sodium                      (d) nitrogen
2. Which of the following can be used to store compressed air in the compressed energy storage?  
(a) caves                      (b) old mines                      (c) lakes                      (d) ocean
3. Anemometer is used to measure  
(a) speed of light                      (b) speed of wind                      (c) speed of vehicle                      (d) None of these
4. Pyranometer is used to measure  
(a) flux of wind                      (b) solar irradiance                      (c) distance of sun                      (d) None of these
5. One Kilowatt hour is equal to  
(a)  $3.6 \times 10^4$  joules                      (b)  $3.6 \times 10^5$  joules                      (c)  $3.6 \times 10^6$  joules                      (d)  $3.6 \times 10^3$  joules

**FILL IN THE BLANKS:**

6. IEA stands for \_\_\_\_\_.
7. Unit of energy is \_\_\_\_\_.
8. LCA stands for \_\_\_\_\_.
9. The instrument used to measure the direction of wind is \_\_\_\_\_.

**ANSWER IN A SENTENCE OR TWO:**

10. Define Energy.
11. List down the regions of an electromagnetic spectrum.
12. What is acid rain?
13. What is the role of an inverter?
14. What are the causes of ozone layer depletion?
15. What is biomass?
16. What is the role of a gearbox in a wind mill?
17. Give the basic principle of a generator?
18. What is a thermocouple?
19. What are the two important properties of biogas?
20. What is primary energy demand?

**SECTION B****ANSWER ANY SIX QUESTIONS:****(6×3=18)**

21. What do you mean by global warming?
22. Define sound energy.
23. What do you understand by nuclear energy?
24. Write a short note on chemical energy
25. What is thermal energy?
26. State the laws of thermodynamics.
27. What are Fossil fuels?
28. What are the differences between primary and secondary renewable energy sources?
29. What are the advantages of electrical energy?
30. List out the types of energy storage and its characteristics.

**SECTION C****ANSWER ANY TWO QUESTIONS:****(2×6=12)**

31. Explain the renewable and non-renewable energy sources with examples.
32. Give an account on 'Energy Crisis'.
33. Discuss the global energy consumption.
34. Describe about the utilization of energy in human activities.

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