STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86

(For candidates admitted during the academic year 2016 – 2017 & thereafter)

SUBJECT CODE: 16VS/VM/FC16 B.Voc. DEGREE EXAMINATION, NOVEMBER 2022 SUSTAINABLE ENERGY MANAGEMENT FIRST SEMESTER

COURSE : MAJOR CORE

PAPER : FORMS OF ENERGY AND ENERGY CRISIS

TIME : 6 HOURS

MAX.MARKS:100

(Theory: 50 marks + Practical: 50 marks)

SECTION-A

ANSWER ALL QUESTIONS

(20 x 1 = 20)

I. CHOOSE THE CORRECT ANSWER

1.	Which of the following is not Mechanical Energy.			
	a. Pedalling a bicycle,			b. rowing a boat,
	c. sharpening the pencil with sharpener,			d. switching on a electrical bulb
2. What type of energy conversion is taking place in an incandes				ace in an incandescent bulb
	a. Electrical to thermal,			b. thermal to electrical,
	c. electrical to light,			d. electrical to mechanical
3.	In an oven what kind of energy is produced			
	a. light,	b. thermal,	c. mechanical	, d.chemical
4.	. Which of the statements is correct about Solar Energy?			
a. It is a renewable and conventional (old) source of energy,				ource of energy,
	b. It is a non-renewable and non-conventional (new) source of energy,			
c. It is a renewable and non-conventional (new) source of energy				ew) source of energy,
	d. It is a non-renewable source of energy.			
5. Which is not a safety device?				
	a.Helmet,	b.Gloves,	c.chair,	d.apron

II. FILL IN THE BLANKS

- 6. In a thermal power plant ______are burnt to heat water and produce steam.
- 7. Energy and Work are measured in _____
- 8. ______ is an ultimate source of energy.
- 9. Most of the energy demand of India is fulfilled only by ______ energy sources.
- 10. _____ cells can be used to convert solar energy into electricity.
- 11. steady increase in the world's population and its demands for fuel and products causing

 $(6 \times 3 = 18)$

III STATE WHETHER TRUE OR FALSE

- 12. Burning coal fuels produces the least amount of carbon dioxide per unit of energy
- 13. Energy can neither be created nor be destroyed.
- 14. Electricity consumption of our house is reported in Mwh
- 15. In a battery the thermal energy is converted into electricity
- 16. Population is one of the factors for energy demand.

IV ANSWER IN A SENTENCE OR TWO

- 17. Example of sound energy.
- 18. Non renewable Energy
- 19. Device converting mechanical energy to electrical energy
- 20. Unit of Electric Current.

SECTION B

ANSWER ANY SIX QUESTIONS:

- 21. Differentiate between Renewable and Non-Renewable energy sources.
- 22. Write a short note on light Energy.
- 23. How is the cumulative energy demand for a country calculated?
- 24. What is energy consumption per capita? Give the energy consumption per capita for India (approximately)?
- 25. Give a brief discussion on the age of renewables and alternatives.
- 26. Discuss about how overpopulation is causing an energy crisis?
- 27. Name some unexplored renewable energy options and tell about how energy can be generated from that.
- 28. Write a short note on Energy conservation practices in home
- 29. If a bulb of 30W and a fan of 60W is switched on for 7 hours per day. How much electrical energy is consumed in a month
- 30. Write a brief note on the basic first aid and safety at work place.

SECTION C

ANSWER ANY TWO QUESTIONS:

- 31. Explain in detail about the various forms of energy with examples for each form and tell about how energy is harvested from it.
- 32. Discuss in detail about the 2 power plants
- 33. Write a detailed note on various energy storage systems.
- 34. "Energy Development for the future is in the hands of Renewable energy" Do you agree on this? Justify your answer.

$(2 \times 6 = 12)$