

Reg. No.

Question Paper Code

11618

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

Fifth Semester

Mechanical Engineering

20MEEL505 - ENVIRONMENTAL AND ENERGY MANAGEMENT

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|---|-------------------------------|
| 1. What primary energy is most widely used in Indian Villages? | 2,K2,CO1 |
| 2. Which is the most ubiquitous form of energy but not a primary energy? | 2,K2,CO1 |
| 3. Name the most efficient renewable energy source that is most widely and commercially used. | 2,K2,CO2 |
| 4. Which plant gives higher thermal efficiency, fossil fuel plant or nuclear plant? Give reason? | 2,K2,CO2 |
| 5. What is the worst effect of Industrial revolution? | 2,K2,CO3 |
| 6. Name the most efficient equipment used for controlling solid emission in industry. | 2,K2,CO3 |
| 7. Name two worst nuclear accidents in the history of nuclear energy. | 2,K2,CO4 |
| 8. What is the negative consumerism? Explain in short? | 2,K2,CO4 |
| 9. Name two mechanical instruments used in energy audit. | 2,K2,CO5 |
| 10. What is the approximate contribution of nuclear energy to India's power production? Is it increasing or decreasing? | 2,K2,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Explain following in short (In less than five sentences each). Make diagram where needed. 13,K2,CO1
1. Smog, 2. Ozone layer, 3. Acid rain, 4. Green House Effect, 5. Global warming, 6. Climate change.

OR

- b) What is the effect of fossil fuels in energy production? Explain in detail. 13,K2,CO1
12. a) List various components of hydro-electric plant with the help of sketch and state their functions. 13,K2,CO2

OR

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

11618

- b) List various components of wind energy plant and their functions with the help of diagram. What are advantages and disadvantages of wind energy? *13,K2,CO2*

13. a) What are the various causes of air pollution, and how to reduce them? *13,K2,CO3*

OR

- b) What is the maximum generation of Carbon dioxide when a fuel is burned in air? *13,K2,CO3*

14. a) What is climate change? What are its causes? How can it be prevented? *13,K2,CO4*

OR

- b) Explain negative aspect of consumerism and how it generates waste. *13,K2,CO4*

15. a) Write an essay on energy scenario after industrial revolution. *13,K2,CO5*

OR

- b) List five electrical instruments and five mechanical instruments used in energy audit stating their functions. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Recently you would have celebrated Deepawali. From thermodynamics explain why a Chakram rotates, why a bomb explodes and why some crackers give light. *15,K2,CO2*

OR

- b) Write an essay on future of nuclear energy in about 200 words. *15,K3,CO5*