

B.Voc. DEGREE EXAMINATION, APRIL 2024
SUSTAINABLE ENERGY MANAGEMENT
SIXTH SEMESTER

COURSE : MAJOR CORE
PAPER : ENERGY FOR SMART CITIES
SUBJECT CODE : 16VS/VM/SC66
TIME :3 HOURS

MAX. MARKS : 100

SECTION – A

I. ANSWER ALL QUESTIONS: (20×1=20)

1. Mention different green building rating systems.
2. Why is urban planning important?
3. What are the advantages of using solar Water Heating System?
4. List out some of the sources of finance to smart cities.
5. State the roles of Public Private Partnership's applicable to smart cities.
6. What are Essential elements of smart cities?
7. Outline the Structural concept, Specific applications, Perspective in Smart Cities.
8. Explain the vision and mission of 100 cities project.
9. Mention some of the solar energy in transportation.
10. What is FEV?

II. FILL IN THE BLANKS:

11. power plants use the flow of rivers and streams to turn a turbine to power a generator, releasing electricity.
12. The basic components for every city includes.....
13. A smart city supports, smart traffic lights and smart parking.
14. The Smart Cities Mission in India is a sponsored scheme.
15. A is a general plan or set of plans intended to achieve something, especially over a long period.

III. CHOOSE THE CORRECT ANSWER

16. Renewable resources also produce,
a) clean energy b) greenhouse gas emissions c) less pollution d) All of these
17. Solar cells are integrated into larger structures known as....., where the desired values of current and voltage can be achieved.
a) solar panels b) solar thermal collectors c) solar water heaters d) All of these
18. Suggested indicators for smart city performance
a) Housing b) Education c) Health d) All of these
19. Flaws of smart cities includes
a) Infrastructure Costs b) Dependency on Technology
c) Data Management and Governance d) All of these
20. are known as Zero-Emission Vehicles..
a) PHEV b) FCEV c) HEV d) BEV

SECTION – B**ANSWER ANY FOUR QUESTIONS:****(4x10=40)**

21. What are the available green initiatives to meet the energy demand? What are the essential elements of smart city?
22. Explain Patrick Geddes Town Planning Concept.
23. What is Indirect Solar Energy? Explain their types and uses.
24. Differentiate conventional and smart city.
25. Discuss the core infrastructure elements in a Smart City.
26. What are electric vehicles and their types? Explain them.

SECTION – C**ANSWER ANY TWO QUESTIONS:****(2x20=40)**

27. Classify energy demand and discuss them in detail. Also explain Energy strategy 2020.
28. Illustrate various smart and innovative approaches to city planning and design.
29. Describe in detail, additional resources for financing Smart Cities.
30. Discuss in detail Top 7 Smart Cities in the World.
