21102688

QP CODE: 21102688

Reg No : ....

Name : ....

B.VOC DEGREE EXAMINATIONS, OCTOBER 2021

Fourth Semester

B.Voc Renewable Energy Technology and Management

CORE - RETTS404 - ENERGY STORAGE SYSTEMS

2019 Admission Onwards

2E61A826

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Write down any one disadvantage of compressed air energy storage.
2. Define dual media storage.
3. Define cryogenic temperature.
4. Draw the basic representation of a Cell.
5. Write down any 2 advantages of Super Capacitors.
6. What is Hard Sulphation?
7. How SHS is different from Latent heat storage?
8. In stratified storage tanks which is the energy storage medium.
9. Write any 2 advantages of aquifers.
10. Which are the various phase changes occuring in a material?
11. What is meant by phase transition?
12. What is a PCM solar wall?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Briefly explain energy storage systems and its types.

14. Explain how energy storage systems contributes to green transportation.

15. What is hydrogen storage? What are its types?

16. Explain in detail the constructional features of molten salt batteries.

17. Write short note on Nickel Cadmium battery.

18. Explain the working of SMES.

19. Rock acts as its own heat exchanger. Explain.

20. Explain the importance of thermal energy storage.

21. Write down the operation of ventilated façade with PCM.

(6×5=30)

Part C

Answer any two questions.

*Each question carries **15** marks.*

22. With neat diagrams explain the working, advantages and disadvantages of different types of sensible heat storage systems.

23. Explain SMES with its main componets.

24. Explain the energy storage in ATES systems along with advantages of Aquifers.

25. Discuss on PCM based energy storage with advantages and disadvantages.

(2×15=30)