QP CODE: 22101653

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Reg No : .....

Name : .....

B.VOC DEGREE EXAMINATIONS, APRIL 2022

Sixth Semester

B.Voc Renewable Energy Technology and Management

RETTG603 - GRID INTEGRATION

2019 Admission Only

11EF2113

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Bring out the difference between isolators and circuit breakers.
2. What is Earth Mat?
3. List out any one KSERC regulations for metering of a rooftop solar PV power plant.
4. How is the solar module earthed?
5. What is a net meter?
6. Draw the power triangle.
7. Draw an example of distorted voltage waveform.
8. List any two solar PV plant hazards.
9. Draw a neat sketch of PV wind hybrid system.
10. Compare micro hydel hybrid system and PV wind hybrid system.
11. Write a note on Solar-cum-Biomass dryer Hybrid system.
12. Explain hydrogen powered E-Vehicles.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Why is Alternating Current used for transmission?

14. Write a brief note on substation Bus bar arrangement .

15. Write a short note on Lightning protection of the rooftop solar PV power plant.

16. Draw a single line diagram for a solar rooftop power plant.

17. With the help of a neat sketch explain about hybrid inverters.

18. What are the safety precautions adopted while working with a solar inverter?

19. What are hybrid systems? List out the needs for hybrid systems.

20. Bring out the difference between a PV hybrid system and biomass diesel hybrid system?

21. Briefly explain Biogas-Solar thermal hybrid system.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Briefly explain about substation metering equipment.

23. Write short note on i)PV Modules ii) Charge Controllers iii) Solar Inverters

24. What are hazards associated with photovoltaic installations?

25. With the help of a neat sketch explain PV hybrid with Diesel generator.

(2×15=30)