22102524

QP CODE: 22102524

Reg No : .....

Name : .....

B.VOC DEGREE REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, JUNE 2022

Second Semester

B.VOC RENEWABLE ENERGY TECHNOLOGY AND MANAGEMENT

RETTS203 - PHOTOVOLTAIC MODULE INSTALLATION

2019 Admission Onwards

65C64642

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What is a PV module ?
2. Define STC.
3. What is the role of warrenty period on quality of a PV module ?
4. Mention the different components of a PV array combiner box.
5. Mention the different types of semiconductor devices that can be used in a semi-commutated inverters.
6. Mention the different types of efficiencies related to grid-connected inverter.
7. How DC main switch is rated ?
8. State the importance of consulting with the customer.
9. Describe the use of a solar path finder.
10. Explain the case study prepared by Technical university Berlin.
11. What are the factors to be considered while sizing a string cable?
12. What is Final yield factor?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Compare mono crystalline and poly crystalline solar cells.
14. Explain the solar irradiance dependance of PV module with the help of necessary graphs.
15. How change in temperature effect the parameters of a PV module ?
16. Compare normal inverter with a Grid-connected inverter.
17. How overloading effect an inverter ?
18. Compare self shading and direct shading.
19. What are the points to be included in checklist during building survey?
20. How the power rating of inverters can be done?
21. What are the criteria for external lightning protection during installation of a PV system?

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Draw the equivalent circuit diagram, characterstic I-V curve and label the solar cell parameters of a solar cell and expain it.
23. Explain a)module and string cables b)connection systems.
24. Explain the shading with rack mounted PV arrays?
25. Discuss in detail the system concepts.

(2×15=30)