

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2016–2017& thereafter)

SUBJECT CODE: 16VS/VM/ST56

B.Voc. DEGREE EXAMINATION, NOVEMBER 2022
SUSTAINABLE ENERGY MANAGEMENT
FIFTH SEMESTER

COURSE : MAJOR CORE

PAPER : SOFTWARE TOOLS FOR ENERGY ANALYSIS

TIME : 6 HOURS

MAX.MARKS:100

(Theory: 50 marks + Practical: 50 marks)

SECTION – A

ANSWER ALL QUESTIONS:

(20x1=20)

I. Choose the correct answer:

1. PVsyst work on
a. Mac OS b. Windows OS c. Linux OS d. above all
2. eQUEST software can be used at _____stage of a building development
a. early b. every c. final d. None
3. The tonne unit used in RETScreen refers to _____
a. Metric tonnes b.10 Metric tonnes c. 100 Metric tonne d. None of the above
4. Electrical Consumption in the eQUEST software is given by
a. Kilo watt-hour b. Mega watt-hour c. watt-hour d. units
5. Gas consumption is given by the unit
a. Litre b. Kg c. Btu d. KWh

II. Fill in the blanks:

6. HVAC stands for _____
7. PVsyst will propose an array /system configuration, that allows you to conduct a _____simulation
8. The RETScreen Software is a software package developed by the Government of _____
9. Latest version of eQUEST software is _____
10. GHG stands for _____

III. State whether True or False:

11. eQUEST is freeware
12. PVsyst 7.2 is a PC software package for the study, sizing and data analysis of complete PV systems
13. To perform a RETScreen project analysis, the user may select a currency of their choice
14. PVsyst is also used by bankers
15. PVSOL is 3D software tool.

IV Answer in a sentence or two:

16. What is the use of PVsyst software?
17. Is water heater part of HVAC?
18. In what way RETScreen Expert is different from RETScreen?
19. Expand eQUEST?
20. Name one software to harness Geothermal Energy

SECTION – B**ANSWER ANY SIX QUESTIONS:****(6x3=18)**

21. What is preliminary design in PVsyst?
22. How do you create a project on PVsyst?
23. Why is HVAC important?
24. Write down the system requirements for installing RETScreen software.
25. What are the colour codes in RETScreen?
26. What is eQUEST used for?
27. Explain the five step Standard Analysis in RETScreen
28. How do you download eQUEST software?
29. Write a note on the simulation of solar panel installation in building using software.
30. Select 2 batteries with same capacity but different voltages. Compare their specifications

SECTION – C**ANSWER ANY TWO QUESTIONS:****(2x6=12)**

31. Compare the project developed in PVSyst variant and give a detailed report.
32. Give the flow chart for a PVSyst preliminary design and explain each and every component with an example.
33. Fill in the table using the developed eQUEST software and obtain a report comparing the efficiency with different materials used.

<i>Building Type:</i>						
<i>Description of Material Used:</i>						
S. No	No of Rooms	Area	Occupancy	Variant	Comments	Overall Comment
1.				Variant 1		
2.						
3.				Variant 1		
4.						

34. Write a note on the performance analysis of the RETScreen software with an example
