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VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Continuous Assessment Test – I

Programme Name & Branch: B. Tech (BEM, BME, BPI, BCE)
Course Name & Code: MEE1011-RENEWABLE ENERGY SOURCES

Class Number: 1416
Exam Duration: 90 mins

Slot: C1+TC1
Maximum Marks: 50

General instruction(s):

- Attested Datasheet may be permitted

ANSWER ALL QUESTIONS (50 Marks)		
S. No.	Question	Course Outcome (CO)
1.	Find the solar hour angles, sun rise time and sun set time hour angle of a collector located at GDN Terrace, VIT University, Vellore on 21 st September 2019. The collector is kept at angle of latitude of Vellore and oriented 35° E from South. Determine the following solar angles: Solar azimuth angle, altitude angle, incidence angle, and zenith angle. The time of observation is at solar noon of the day. (18 Marks)	1
2.	How do you optimize the incidence angle of a solar thermal devices located at the tropic of cancer region? (8 Marks)	2
3.	List out the parameters affecting the performance of solar conventional flat plate collector. Draw the thermal efficiency curve of solar liquid flat plate collector with temperature differences of fluid inlet temperature and ambient air at different solar insolation. (14 Marks)	2
4.	Draw the pie chart of Indian energy scenario and explain the context. (10 Marks)	1