அரசினர் ஆடவர் கலைக்கல்லூரி (தன்னாட்சி), நந்தனம், சென்னை – 35.

CODE: **196242** TIME: 2Hrs

NOVEMBER 2020 MAX. MARKS : 50

PART A *(10 x 2=20)*

*Answer any **TEN** questions*

1. What is clean energy?
2. Compare conventional and non conventional energy sources.
3. What is the function of wave energy converter?
4. Write short notes on under water wind mill.
5. What are the factors affecting the distribution of wind energy over the surface of earth?
6. What are the merits of WECS?
7. Write the composition of biogas prepared from wood.
8. What is the use of a gasifier?
9. What is photovoltaic effect?
10. Draw the block diagram of grid connected PV system.
11. Define solar constant.
12. Define VAWT (Vertical Axis Wind Turbine)

PART B *(2 x5=10)*

*Answer any **TWO** questions*

13. What is stored chemical energy? Explain with examples.
14. Write notes on Tidal currents.
15. What are the disadvantages of using wind energy?
16. Explain the preparation of biodiesel.
17. Obtain the efficiency of a solar cell.
18. Write notes on oscillating hydrofoils.
19. Explain the working of floating dome gas plant.
20. Explain the working of fuel cell.

PART C *(2x10=20)*

*Answer any **TWO** questions*

21. Write an essay on energy storage and distribution.
22. Explain OTEC in detail with necessary neat sketches.
23. Deduce an expression for power in the wind. Describe how wind energy is harnessed by wind mill.
24. Explain the construction and working of Deena Bandhu model of gobar gas plant. What are the advantages and disadvantages of biomass as energy source.
25. Derive an expression for maximum power output of a solar cell. Describe the hyprid PV concentrated solar thermal electric power system.
