

Time – Three hours
(Maximum Marks: 75)

*(N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory.
Answer any FOUR questions from the remaining in each PART – A
and PART – B*

(2) Answer division (a) or division (b) of each question in PART – C.

*(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and
10 marks in PART – C.]*

PART – A

1. What are the forces acts on wind blades?
2. What is meant by latent heat storage?
3. What is meant by thin film PV?
4. List the components of tidal power plant.
5. Define photo synthesis.
6. List out any four energy audit instruments.
7. Define solar radiation.
8. What are the disadvantages of vertical axis wind machine?

PART – B

9. Write note on standard of living.
10. Explain about thermo chemical storage.
11. Describe about environmental impact of solar photovoltaic system.
12. Write a note on biomass liquefaction.
13. Explain about recycling technique of energy management.
14. Write a note on usable forms of bio mass.
15. Write a note on arriving load capacity to solar home lighting system.
16. Compare flat plate and concentrating collectors.

[Turn over.....

PART – C

17. (a) (i) Discuss about the consumption trend of primary energy sources.
(ii) Explain in detail about the importance of renewable energy sources.

(Or)

- (b) (i) How is site selection to be done for wind energy system?
(ii) Explain the safety and environmental aspects of wind energy system.

18. (a) (i) How the solar radiation is received at the earth surface?
(ii) Write a note on solar cooker.

(Or)

- (b) Explain in detail about the solar industrial heating systems.

19. (a) Explain about the working principle, construction and applications of solar photovoltaic cells.

(Or)

- (b) (i) Discuss about the principle of OTEC.
(ii) Explain any one method of ocean thermal electric power generation with a suitable sketch.

20. (a) Explain how energy conversion can be done from urban waste.

(Or)

- (b) Discuss the following:
(i) Ethanol production from biomass.
(ii) Bio diesel production.

21. (a) Discuss about the energy costs and energy performance.

(Or)

- (b) Discuss about the possible ways to improve boiler efficiency.
