1305 **Code : 15EE32T**

Register Number | | | | | | | | | | |

III Semester Diploma Examination, Nov./Dec.-2018

ELECTRICAL POWER GENERATION

Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer any **six** questions from Part-**A**. Each question carries **5** marks.

(ii) Answer any **seven** questions from Part-**B**. Each question carries **10** marks.

PART – A

1. State the importance of Electrical Power Generation. **5**

2. List the advantages and disadvantages of Thermal Power Plant. **5**

3. Compare thermal power plant with Nuclear Power Plant. **5**

4. Explain with block diagram of Solar Cell. **5**

5. Compare Horizontal axis & vertical axis wind turbine generators. **5**

6. Explain the construction and working of Heaving Float type wave energy conversion device. **5**

7. Compare movable and fixed dome type Biogas plants. **5**

8. Define fuel cell. Give the classification of fuel cells. **5**

9. List the effects of low power factor on power plants. **5**

PART – B

10. Draw the general layout of Hydro power plant and explain the function of any six components. 10

11. (a) List the factors to be considered for selection of site for Thermal power plant. 5
    (b) Explain with block diagram of stand alone Solar PV. 5

12. (a) Draw the schematic diagram of Diesel power plant and label the parts. 5
    (b) List the advantages and disadvantages of Gas Turbine power plant. 5

13. (a) Explain the environmental impacts of Solar PV system on Environment. 5
    (b) Write the merits and Demerits of Solar PV cells. 5

14. (a) Explain the origin of Global and Local winds. 5
    (b) What are the factors affecting distribution of wind energy on earth surface ? 5

15. (a) Explain with neat diagram construction of Horizontal axis with turbine. 7
    (b) List any three factors to be considered for selection of site for wind power plant. 3

16. (a) Explain with neat diagram Single Basin type tidal power plant. 4
    (b) Explain with Block diagram open cycle OTEC plants. 6

17. (a) List the advantages and disadvantages of Biogas plants. 4
    (b) Explain with Block diagram Municipal Solid Waste (MSW) to energy incineration plant. 6

18. (a) Explain the working principle and operation of Alkalyne Fuel Cell (AFC) with a neat Diagram. 7
    (b) List the applications of fuel cells. 3

19. (a) Explain with block diagram construction and working of PV-Wind Hybrid system. 6
    (b) Explain the losses of fuel cells. 4