

**1229****Code : 15EE32T**Register  
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**III Semester Diploma Examination, Nov./Dec. 2017****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** full questions from Part – B. Each question carries **10** marks.

**PART – A**

1. List any five merits and demerits of hydro power plant. **5**
2. Draw a neat sketch of thermal power plant and label it. **5**
3. With a neat sketch explain the working of nuclear power plant. **5**
4. List the advantages and disadvantages of Photovoltaic system. **5**
5. Compare horizontal axis and vertical axis wind turbine. **5**
6. With a neat sketch explain the working of heaving float type wave device. **5**
7. List the merits and demerits of biomass power plant. **5**
8. List the advantages of fuel cell. **5**
9. Explain the construction and working of PV – wind hybrid system with a block diagram. **5**

**PART – B**

10. (a) Draw the general layout diagram of hydro power plant and explain. **6**  
(b) Explain Water Hammer. **4**

**[ 1 of 2 ]****[Turn over**

11. (a) Explain environmental impact of thermal power plant. 5  
(b) Compare thermal power plant with nuclear power plant. 5
12. (a) Explain the construction and working of gas turbine power plant. 5  
(b) Explain the construction of solar cell with a neat diagram. 5
13. (a) Explain the operation of stand-alone PV system and draw the diagram. 5  
(b) Explain environmental impact of solar P.V. system. 5
14. (a) List out the factors which are affecting distribution of wind energy on the surface of earth. 5  
(b) Explain with a neat diagram, construction and operation of horizontal axis wind turbine generator. 5
15. (a) List the factors to be considered for the site selection of wind power plant. 5  
(b) Explain the environmental impact of wind power plant. 5
16. (a) Classify the types of tidal power plant. 5  
(b) Explain with a neat diagram, the construction and working of movable drum type biogas plant. 5
17. (a) Explain the working of single basis type tidal power plant and draw its diagram. 5  
(b) List the importance of biomass energy and write the materials used for biogas generation. 5
18. (a) Explain the working principle and operation of phosphoric acid fuel cell (PAFC). 5  
(b) Explain with a neat diagram construction and working of PV – diesel hybrid system. 5
19. (a) Explain environmental impacts and performance limiting factors for a fuel cell. 5  
(b) Write the causes and effects of low power factor as power plant. 5