1490

Code : 15EE32T

Register Number | | | | | | | |

III Semester Diploma Examination, Nov./Dec. 2016

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. List any five factors to be considered for the site selection of hydroelectric power plants. **5**

2. Explain the function of surge tank with a neat sketch. **5**

3. Explain working of nuclear power plant with a neat sketch. **5**

4. Explain construction and working of a Solar cell with sketch. **5**

5. Compare horizontal axis and vertical axis wind turbine power plants. **5**

6. List any five disadvantages of tidal power plants. **5**

7. Explain construction and working of heaving float type wave energy conversion devices. **5**

8. Explain working of Phosphoric Acid Fuel Cell (PAFC) with neat sketch. **5**

9. With block diagram explain construction & working of PV-diesel hybrid system. **5**

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PART-B

10. Explain the working of thermal power plant with a neat layout diagram. **10**

11. (a) List any five advantages of hydroelectric power plant. **5**
    (b) List any five disadvantages of PV (Photo-Voltaic) systems. **5**

12. (a) With neat sketch explain construction and working of gas turbine power plant. **6**
    (b) List any four demerits of diesel power plant. **4**

13. (a) Explain stand alone photo-voltaic system with a neat sketch. **6**
    (b) Explain materials used for Solar Cells. **4**

14. (a) List the factors to be considered for the site selection of wind power plants. **5**
    (b) List the factors affecting distribution of wind energy on the surface of the earth. **5**

15. (a) With a neat sketch explain vertical axis wind turbine power plant. **6**
    (b) Explain any four environmental impacts of wind power plants. **4**

16. (a) Explain construction & working of fixed dome type biogas plant. **6**
    (b) Explain principle of Ocean Thermal Energy Conversion (OTEC). **4**

17. (a) Explain double basin type tidal power plant with a neat sketch. **6**
    (b) Draw the block diagram of muncipal solid waste energy incineration plant. **4**

18. (a) List the causes of low power factor. **4**
    (b) List the applications of fuel cell. **6**

19. (a) Explain effects of low power factor. **6**
    (b) Draw the block diagram of PV-Wind hybrid power generation system. **4**