C16-**M-504**

6640

BOARD DIPLOMA EXAMINATIONS

OCT/NOV-2019

DME – FIFTH SEMESTER

ENERGY SOURCES & POWER PLANT ENGINEERING

Time: 3 hours Max. Marks: 80

PART – A **3 X 10 = 30**

Instructions: *1. Answer **all** questions.*
*2. Each question carries **Three** Marks.*
3. Answer should be brief and straight to the point and should not exceed Five simple sentences.

1. List out various sources of renewable energy.
2. What are the main applications of solar energy?
3. List out the different methods of storing Solar energy.
4. List out the advantages and limitations of wind energy.
5. State the working principle of fuel cell.
6. State the advantages and limitations of bio-energy.
7. List out the factors to be considered for selection of site for tidal power plant.
8. List out the basic elements of steam power plant.
9. State the advantages and limitations of steam power point.
10. Write any three differences between Nuclear fission and Nuclear fusion.

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PART – B 5 X 10 = 50

***Instructions**:* *1. Answer any **Five** questions*
*2. Each question carries **TEN** Marks.*
3. Answer should be comprehensive and Criteria for Valuation are the content but not the length of the answer.

11. Explain the solar water pumping system with a neat sketch.

12. Describe the following with a neat sketches.

    a) Solar still b) Solar drier (cabinet type)

13. Explain Electric power generation using wind mill with a neat sketch.

14. Explain working of a MHD generator with a neat sketch.

15. Explain the construction and working of fixed dome type biogas plant with a neat sketch.

16. a) How the power generated in double basin tidal arrangement.

    b) State the advantages and disadvantages of tidal power plant.

17. List out different types of dust collectors. Describe the working of cyclone type dust collector.

18. Describe the operation of PWR (pressurised water reactor) power plant with a neat sketch.