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BOARD DIPLOMA EXAMINATION
JUNE - 2019
DIPLOMA IN MECHANICAL ENGINEERING
ENERGY SOURCES & POWER PLANT ENGINEERING
FIFTH SEMESTER EXAMINATION

Time: 3 Hours **Total Marks: 80**

PART - A (3m x 10 = 30m)

Note 1:Answer all questions and each question carries 3 marks

2:Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. What is the need of renewable source of energy?
2. List the forms thermal storage and electrical storage of solar energy
3. Write the three applications of solar dryer
4. List out the factors which effects performances of windmill
5. State the working principle of fuel cell
6. State the chemical composition of bio-gas
7. What are the factors to be considered for selection of site for tidal power plant?
8. State the requirements of coal handling system
9. Write the need of soot blower in steam power plant
10. How nuclear energy can be released

PART - B (10m x 5 = 50m)

Note 1:Answer any five questions and each carries 10 marks

2:The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Explain the construction and working of solar cell with a neat sketch
12. Explain the working of air flat plate collector with a neat sketch
13. With a neat sketch explain how windmill can be used to generate electricity?
14. Illustrate the working of an MHD generator with the help of neat sketch
15. Explain the bio-mass energy production technologies

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16. Explain any two operational methods of total tidal energy utilisation with the help of sketches

17. Explain the thermal method of water treatment

18. Explain the process of nuclear fission and fusion and how a PWR nuclear reactor differs from BWR.

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