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BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL - 2019
DIPLOMA IN MECHANICAL ENGINEERING
ENERGY SOURCES & POWER PLANT ENGINEERING
SIXTH SEMESTER EXAMINATION

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

PART - A (10 x 3 = 30 Marks)

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. Write any six sources of Renewable Energy?
2. Define Solar Constant. What is its Numerical Value?
3. Write three forms of chemical storage of solar energy.
4. List out different types of fuel cells.
5. What is a bio gas?
6. List out the factors affecting bio digestion generation of gas.
7. What are the operating methods of utilisation of Tidal Energy?
8. Write the difference between condensing plants & Non-condensing plants.
9. Differentiate nuclear fission or nuclear fusion.
10. Write the effect of nuclear radiation on environment.

PART - B (5 x 10 = 50 Marks)

Note 1: Answer any five questions and each question 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. a) Write the classification of Concentrating type solar collectors
b) Explain line focussing type concentrating collector with a neat sketch.
12. Explain the working of Solar still with a neat sketch.
- * 13. Illustrate the working principle of an MHD generator. State the advantages of MHD generator.
14. What are the constructional details of a Bio gas plant?
15. Explain single basin and double basin arrangements with neat sketch.
16. Describe the working of nuclear reactor with a neat sketch explaining the function of each component?
17. With line sketches explain any two coal handling equipments.
18. a. State the advantages and limitations of wind energy.
b. Distinguish between surface condenser and jet condenser.

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