



C14-M-603

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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DME - VI SEMESTER EXAMINATION

ENERGY SOURCES AND POWER PLANT ENGINEERING

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=30

Instructions :

- (1) Answer **ALL** questions.
- (2) Each question carries **THREE** marks.
- (3) Answer should be brief and straight to the point and shall not exceed five simple sentences.

- 1 State three advantages of non conventional energy sources.
- 2 Write three applications of wind energy.
- 3 Define working principle of photovoltaic cell.
- 4 Write three applications of fuel cell.
- 5 Write three materials with examples used for generation of bio-gas.
- 6 Discuss any three factors to be considered for selection of site for tidal power plant.
- 7 State the function of control rods in nuclear power station.
- 8 What are the different types of coal handling equipment ?
- 9 State three advantages of fast breeder reactor.
- 10 What is green house effect ?

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[Contd...

PART - B**10×5=50**

- Instructions :**
- (1) Answer any **FIVE** questions.
 - (2) Each question carries **TEN** marks.
 - (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11 Describe briefly the following with neat sketches :
 - (a) Non-convecting solar pond
 - (b) Solar still
- 12 Explain the working of vertical wind mills with neat sketches.
- 13 Explain open cycle MHD Generator with sketch.
- 14 Explain the construction details and working of KVIC (Khadi and Village Industries Commission) digester.
- 15 Explain single basin and double basin arrangements with neat sketch in utilization of Tidal Energy.
- 16 Explain the working principle of surface condenser with neat sketch.
- 17 Explain the working and construction of pressurized water reactor with neat sketch.
- 18
 - (a) What is a pollutant ? How they are classified ?
 - (b) Describe the adverse effects of pollutants on men, materials, animals and plants.