

**B.Tech. 7th Semester (F) Scheme (ME) Examination,
December-2018**

POWER PLANT ENGINEERING

Paper-ME-407-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt five questions in all. Question No. 1 is compulsory and select at least one question from each section.

1. (a) Name the various types of power plant.
- (b) Name various hydro plants presently working in north India.
- (c) What is fuel cell ? How the electrical energy is created in fuel cell ?
- (d) What is Economizer ? How much boiler efficiency improves by economizer ?
- (e) Where screw conveyer is used in thermal power plant ?
- (f) What is the water hammer and cavitation in hydropower plant ?
- (g) What is the function of speed governor in hydroelectric station ?
- (h) What do you mean by Utilization factor, Diversity factor and Demand factor ?

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- (i) What do you mean by Depreciation and write the name various method of calculation ?
- (j) What is the function of Photovoltaic cell ?

10×2

Section-A

- 2. Discuss about the site selection of hydropower plant and compare this with other types of power plants such as thermal. 20
- 3. Explain the construction and operation of different components of hydro-electric power plants. Discuss the various factors which govern the site selection of hydro plant. <http://haryanapapers.com> 20

Section-B

- 4. Give the layout of modern stream power plant. Discuss its salient features. 20
- 5. Explain with the help of neat sketch the arrangements or combined plants. Also discuss the repowering systems with gas production from coal. 20

Section-C

- 6. Explain the construction and working of CANDU with neat sketch with its various advantages and disadvantages. 20

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- 7. Explain the construction and working of BWR. Compare the working of PWR with the BWR. 20

Section-D

- 8. With neat sketch, explain the working of OTEC, wind power plants, tidal power plants. 20
- 9. Describe in brief the following method of energy generation : 20
 - (a) Thermionic power generation.
 - (b) Magneto hydro dynamics (M.H.D.)
 - (c) Fuel cells

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