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Code No: EE1514

GEC-R14

II B. Tech I Semester Supplementary Examinations, May 2016

Power Systems-I

(Electrical and Electronics Engineering)

Time: 3 Hours

Max. Marks: 60

Note: All Questions from **PART-A** are to be answered at one place.

Answer any **FOUR** questions from **Part-B**. All Questions carry equal Marks.

PART-A

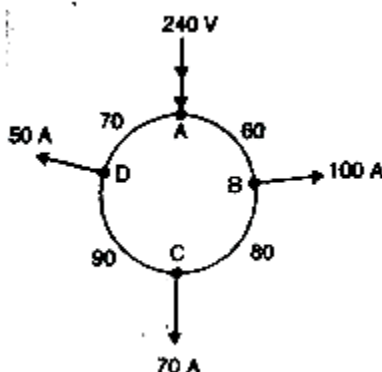
6 × 2 = 12M

1. What is pulverization? State its advantages.
2. Give any four effects of Nuclear radiation.
3. What is the purpose of Surge tank?
4. What are the differences between radial and ring main distribution systems?
5. What are the advantages of GIS?
6. What are the different types of costs of generation?

PART-B

4 × 12 = 48M

1. Explain single line diagram of thermal power plant by showing all the components. (12M)
2. Explain the working of the fast breeder reactor with the help of a neat diagram. (12M)
3. What are the various components of Gas turbine power plant? Explain with the help of block diagram. (12M)
4. A 300m ring distributor has loads as shown in the figure, where distances are in meters. The resistance of each conductor is 0.2Ω per 1000 meters and the loads are tapped off at B, C and D as shown. If the diameter is fed at A at 240V, find voltages at B, C and D. (12M)



5. a) Compare air insulated and gas insulated substations? (6M)
b) Classify bus bar arrangements for substation? (6M)
6. a) Explain load and load duration curves? (5M)
b) A consumer has a maximum demand of 200 KW at 40% load factor. If the tariff is Rs. 100 per kw of maximum demand plus 10paise per kwh, find the overall cost per kwh. (7M)
