

Code No: 124AD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B.Tech II Year II Semester Examinations, November/December - 2020****POWER SYSTEMS - I****(Electrical and Electronics Engineering)****Time: 2 Hours****Max. Marks: 75****Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) What are the factors to be considered for selection of the site for a thermal power station? Explain in detailed.
- b) What are the advantages and disadvantages of the Gas power station? [9+6]
2. Briefly describe the main parts and the working of a Nuclear power station. [15]
3. A two wire DC distributor ABCDEA in the form of a ring main is fed at point 'A' at 230V and is loaded as follows: 10A at B, 20A at C, 30A at D and 10A at E. The resistances of various sections (ground and return) are $AB = 0.2\Omega$, $BC = 0.1\Omega$, $CD = 0.02\Omega$, $DE = 0.05\Omega$ and $EA = 0.15\Omega$. Determine the point of minimum potential and current in each section of distributor. [15]
4. Explain the radial distribution system with neat diagram and list out its merits and demerits. [15]
5. Explain the purpose of each equipment in a sub-station. Draw layout of a 33/11 kv sub-station. [15]
6. Draw the single line diagram of gas insulated substation? Explain its advantages and disadvantages. [15]
7. What are the methods of voltage control and explain shunt capacitor briefly? [15]
8. What is meant by tariff? Explain some commonly used tariffs. [15]

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