Code: 9A02701 **R09**

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December 2015

DISTRIBUTION OF ELECTRIC POWER

(Electrical and Electronics Engineering)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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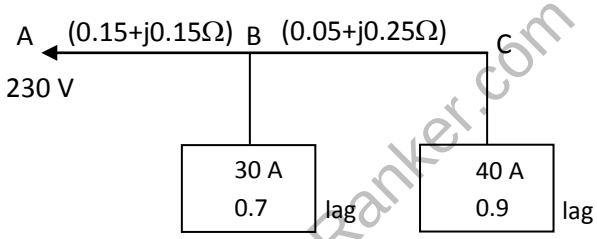
1 (a) Elucidate distribution systems, load modeling with characteristics.
(b) Discuss relationship between the load factor and loss factor.

2 (a) Explain requirements and design features of AC and DC distribution systems.
(b) Explain method for voltage drop calculation for DC ring main distributor.

3 (a) Discuss Radial and loop types of primary feeds and feeder loading.
(b) A single phase AC distribution supplies two single phase loads as shown in figure below. Find the voltage drop from A to C:



4 (a) Discuss one and half breaker system with diagrams.
(b) Explain arrangements for sectionalized single bus bar, transfer bus bar and double breaker.

5 (a) Elucidate causes of low p.f and discuss methods to improve.
(b) Compare shunt and series capacitor role in improving p.f and reactive power.

6 (a) Explain voltage drop calculation on three phase balanced primary line.
(b) Explain power loss calculations in three phase balanced primary line.

7 (a) Explain procedure to determine best capacitor location.
(b) Explain capacitive compensation for power factor control.

8 Explain principles of operation fuses, circuit re-closures and line sectionalizes for protecting distribution systems.

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