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Question Paper Code: 31433

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2016

Fourth Semester

Electrical and Electronics Engineering

01UEE403 – TRANSMISSION AND DISTRIBUTION

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is ring main distribution system?
2. What are the types of DC distributors?
3. Summarize the advantages of bundled conductors.
4. Define skin effect.
5. Define surge impedance.
6. Define Ferranti effect.
7. Summarize the points that an insulator must have the properties.
8. Label the parts of a cable.
9. What is meant by stringing chart?
10. Quote the factors to be considered before selecting the site for a substation.

PART - B (5 x 16 = 80 Marks)

11. (a) Design a power system comprising of generator, transmission system and distribution system. (16)

Or

(b) Compare EHVAC system with HVDC system. (16)

12. (a) Derive the expression for inductance of three phase double circuit line with hexagonal spacing. (16)

Or

(b) Write a short note on: (i) Proximity Effect (ii) Corona discharges. (16)

13. (a) Derive A, B, C, D constants using Nominal T and Nominal Π method for medium lines. (16)

Or

(b) A three phase overhead line has resistance and reactance per phase as 5 ohm respectively. The load at the receiving end is 25 MW , 33 kV at 0.8 p.f lagging. By drawing receiving end power circle, find the voltage at the sending end. (16)

14. (a) With a neat sketch briefly explain about: (i) Pin type insulator (ii) Suspension type insulator. (16)

Or

(b) Explain in detail about the various methods for grading of cables. (16)

15. (a) Derive the expression for sag and tension in a power conductor strung between two supports at equal heights taking into account the wind and ice loading conditions. (16)

Or

(b) Explain in detail about the different types of grounding systems. (16)
