Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(EE / Electrical & Electronics Engg.) (2012 Onwards)
B.Tech (Electronics & Electrical Engg./ Electrical Engineering & Industrial Control) (2012 to 2017) (Sem.–4)

POWER SYSTEMS-I
(Transmission & Distribution)

Subject Code : BTEE-405
M.Code : 57107

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Answer briefly :

Q1. List out the limitation of high voltage power transmission.

Q2. What are the differences between transmission and distribution?

Q3. How inductance and capacitance of transmission line are affected by the spacing between the conductors?

Q4. Define Transposition of a line.

Q5. How will you reduce corona loss?

Q6. Why skin effect is absent in DC systems?

Q7. Define Voltage Regulation of a transmission line.

Q8. What are the advantages of shunt compensation?

Q9. Define Stringing of Conductors.

Q10. What are the tests performed on insulators?

SECTION-B

Q11. Derive the insulation resistance and capacitance of a single core cable.

Q12. Derive the necessary relations when a medium transmission line is represented by nominal T circuit.

Q13. Discuss capacitance grading of underground cable.

Q14. Discuss briefly surge impedance loading and power angle curve.

Q15. Discuss different types of supporting structures for overhead transmission line.

SECTION-C

Q16. Calculate the GMR of conductors having seven strands each of 3mm radius.

Q17. Calculate the string efficiency of a string of three insulator units. The capacitance of each unit to earth and line be 20% and 5% of the self-capacitance unit. Derive any formula that you might be used.

Q18. Explain step by step procedure for construction of receiving-end transmission line. State the ratings of phase modifiers.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.