



C14-EE-503

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**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DEE-FIFTH SEMESTER EXAMINATION**

POWER SYSTEMS-II

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

- Instructions :**
1. Answer **All** questions.
 2. Each question carries **THREE** marks
 3. Answer should be brief and straight to the point

1. What is the need of Transmission & Distribution Lines?
2. What is Skin effect?
3. List out any four requirements of a transmission line conductor.
4. List out any four locations of HVDC projects in India and mention their capacities.
5. Write any four requirements of a line support.
6. Define Sag.
7. Draw the diagram of a Radial Distributor.
8. Write any four advantages of over head lines compared to underground cables.
9. What is the need of an Electrical Sub Station?
10. What is a Feeder and what is a Distributor?

PART-B

10X5=50

Instructions :

1. Answer any **five** questions.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. (a) Explain the effect of Transmission voltage on voltage drop and volume of conductor material.
(b) Compare AC Distribution system with DC Distribution system in any five aspects.
12. Derive the equation for Inductance of a single phase over head line.
13. A power of 200KW is delivered at the end of a single phase line 10 Km long at 1000V @0.8 p.f lag. The resistance of the conductor is 0.03Ω per Km and the loop inductance is 0.3 mH per Km. find (i) The sending end voltage and power factor (ii) the % regulation & (iii) The efficiency of the line.
14. A transmission line has a span of 300m. cross sectional area of conductor is 1cm^2 , weight of conductor is 0.65 Kg/m. breaking stress is 5000Kg/cm^2 . Wind pressure is 0.8 Kg/m and ice coating is 0.6 Kg/m. factor of safety is 2.5 calculate the sag.
15. Explain different methods of improving string efficiency of insulators.
16. Explain the general construction of an underground cable with a neat diagram.
17. List out various equipment used in a substation and explain any three of them.
18. Explain in detail about any two types of distributors with diagrams.
