Question Bank (I- scheme)

Name of Course: ELECTRICAL POWER TRANSMISSION & DISTRIBUTION

Unit Test: II

Course code: (22419) Course - EPT

Semester: IV Program: EE

UNIT III: EXTRA HIGH VOLTAGE TRANSMISSION (06 M)

2 Marks Questions:

1) State any four applications of HVDC transmission system.

4 Marks Questions:

2) Explain the features of wireless transmission of electrical power.
3) Explain the Ferranti effect and corona effect. Discuss any two methods of reducing corona.
4) Draw the diagram representing transposition of conductor and state its importance.
5) State the meaning of FACTS and explain in brief d-types facts controller.

UNIT IV: AC DISTRIBUTION SYSTEM (16M)

2 Marks Questions:

6) Distinguish between feeder and distributor.
7) Draw the neat diagram of radial distribution scheme.
8) Define: Feeder and Distributor.

4 Marks Questions:

9) Draw a well labeled single line diagram for 11 kV / 400 V distribution substation.
10) State the different types of distribution schemes.
11) Explain the Ring Main system of distribution and state its advantages.
12) Draw the Single line diagram showing a typical arrangement of A.C. distribution system.
13) State the requirements of ideal distribution system.
14) State advantages and disadvantages of radial distributor system.
15) List the factors to be considered while designing feeders and distribution with their functions in brief.
16) State the classification of distribution substation.
17) A single phase AC distributor AB 300 M long is fed from end A and is loaded as under. (i) 100 A at 0.707 pf lagging 200 m from point A. (ii) 200 A at 0.8 pf lagging 300 m from

point A, The load resistance and reactance of the distributor is 0.2 ohm and 0.1 ohm per kilometer. Calculate total voltage drop in the distributor. The load power factors refer to the voltage at the far end.

UNIT V: COMPONENTS OF TRANSMISSION & DISTRIBUTION LINE (14M)

2 Marks Questions:

18) Draw the symbols of lightning arrester and circuit breaker.

19) Define sag and state the significance of it.

20) State any four properties of insulating materials.

4 Marks Questions:

21) A three phase overhead line is being supported by three disc insulators. The potential across the line unit is 17.5 kV. Assume that shunt capacitance between each insulator and each metal work of tower to be 1/10th of capacitance of insulator. Calculate: (i) Line voltage and (ii) String efficiency.

22) Compare underground transmission system with over-head transmission system.

23) Explain the different methods of improving string efficiency.

24) Suggest with reason the type of insulators used for following voltage levels of transmission and distribution system. (i) 11 kV Distributors (ii) 132 kV Feeder (iii) 400 kV Tower (iv) 33 kV Distributor.

25) Differentiate between overhead transmission and underground transmission.

26) A 3-φ overhead line supported by 6 disc insulators, the potential across the unit is 11 KV. Assuming shunt capacitance between each Insulator and each metal link is of 1/5th of capacitance of insulator. Calculate : (i) line voltage (ii) string efficiency

27) Derive equation for string efficiency with 3 - disc insulators of suspension type.

28) State any four properties of conductor material used for overhead conductor.

29) Draw and explain the construction of underground cables.

30) Draw the symbols and state their function of components used in substation (any six).

……