S.B. Roll No……..

ELECTRICAL POWER-I

5th Exam/Elect/EEE/2527/Nov'18

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1. Fill in the blanks. **10x1.5=15**

a. The basic principle applied in murry loop test is _____
b. When insulator of one of the line conductor fails, the fault is called _____
c. For combined power and lighting load _____system is used.
d. ACSR conductor stands for _____
e. The insulation resistance of the cable is _____proportional to its length.
f. In India Transmission of electric power is made by _____ system.
g. Power factor of resistive load is always _____
h. The insulating material most commonly used for power cable is _____
i. Which distribution system is more reliable _____
j. Underground system is _____than overhead system.

SECTION-B

Q2. Attempt any six questions. **6x5=30**

i. What are the disadvantages of low power factor?
ii. Explain briefly power distribution system?
iii. What is tarrif? Give the qualities of a good tariff.
iv. Explain the string efficiency of a suspension type insulator?
v. Define transposition of conductor in overhead lines. Explain why transposition is done?
vi. Describe the effect of ice and wind on overhead lines?
vii. Compare the different types of sub-stations?
viii. Discuss the skin effect in overhead lines and factors on which it depends?

SECTION-C

Q3. Attempt any three questions. **3x10=30**

a. Derive the expression for sag and span length for a transmission line?
b. What is meant by grading of cable? Explain why and how the grading of cable is done.
c. i) Describe the various methods for improvement of power factor?
   ii) Describe maximum demand and two part tariff?
d. Draw the key diagram of 33/11kv/400 volt distribution substation and enlist the various auxiliaries and equipments.
e. What is corona loss? What are the remedies to minimize the corona loss?