S.B. Roll No……

ELECTRICAL POWER-II

6th Exam/Elect/EEE/5229/4652/Nov'16

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

SECTION-A

Q1. Fill in the blanks: - **1.5x10=15**

1. In a balanced 3 phase system, the sum of the three 3 phase emfs is equal to …..
2. When switch is opened….is produced.
3. VCB stands for…..
4. A lightening arrestor is always connected between ……. and……..
5. Block rate tariff is usually applicable to…….consumers.
6. Fusing current is ……than current carrying capacity of a fuse.
7. The basic purpose of earthing is……..
8. Ground wire is used to protect transmission line against…….
9. Earth relays have…….current ratings.
10. The most important stator winding fault of an alternator is ……..fault.

SECTION - B

Q2. Attempt any five questions: - **5x6=30**

a) What are the requirements of a good lightening arrestor?

b) The maximum demand of a power plant is 100 MW. The capacity factor is 0.5 and utilization factor is 0.9.find load factor, plant capacity and annual energy generated.

c) What do you mean by power factor? Explain the necessity of improving power factor.

d) What do you understand by switchgear? What is its function?

e) What are symmetrical and unsymmetrical faults?

f) What do you mean by economics of generation? What are the governing factors?

g) Explain an ELCB. Where it is used?

h) Why is earth wire placed above the overhead lines and what is the use of ground wire?

SECTION-C

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

1. Explain the principle and working of a Buchholz relay. Where is it used and why?
2. Give the protection scheme of a transformer.
3. Give function, classification and characteristics of various fuses.
4. Explain comparison between various types of power stations.
5. (a) Give reason, how higher diversity factor can be obtained? Also mention the need of diversity factor
   (b) A generation station has a overall efficiency of 25% and 0.75 kg of coal is burnt per kWh at the station. Determine the calorific value of coal in kilocalories per kg.
6. Write short note on
   (a) Sulphur Hexa fluoride circuit breakers
   (b) Vacuum circuit breaker