6th Sem / Electrical Engg.

Subject : Electrical Power-II / Power-II

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 What is the full form of ELCB?

a) Electric leakage circuit breaker
b) Electric leakage current breaker
c) Electrical leakage circuit breaker
d) Electric line circuit breaker

Q.2 The material used for fuse elements, must have which properties?

a) low melting point b) low ohmic loss
c) high conductivity d) All of the above

Q.3 HRC fuses are used for _____

a) over voltage protection
b) distance protection
c) over current protection
d) differential protection

Q.4 Which of the following materials is used as a filler in HRC fuse?

a) Quartz b) plaster of paris
c) marble d) All of the above

Q.5 The Mho relay is normally used for the protection of

a) Long transmission lines
b) Medium transmission lines
c) Short transmission lines
d) None of the above

Q.6 Which of the following is a type of tariff?

a) Flat rate b) Block rate
c) two part tarrif d) All of the above

Q.7 Ground wire is used to protect transmission lines against _____.

a) Direct lightning strokes b) leakage current
c) heating effects d) All of the above

Q.8 The ratio of average load to the maximum load is called _____

a) peak factor b) load factor
c) inverse factor d) power factor

Q.9 Which of the following is a type of circuit breaker?

a) Air break circuit breaker
b) Air blast circuit breaker
c) SF_6 circuit breaker
d) All of the above

Q.10 What is the full form of OCB?

a) Over current breaker
b) Over circuit breaker
c) Oil circuit breaker
d) Oil current breaker

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 What is a static relay?

Q.12 What is the full form of HRC?

Q.13 What do you mean by symmetrical faults?

Q.14 Define the term neutral wire.

Q.15 Which fault is considered as most dangerous in power system?

Q.16 Define the term "tariff".

Q.17 Mention any two underground faults.

Q.18 What do you mean by surge diverter?

Q.19 What is line to ground fault?

Q.20 Double line fault is a type of which kind of fault?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Explain different types of faults in transmission lines.

Q.22 Calculate the total units consumed per year by a consumer if it's maximum demand is 500kW and annual load factor is 70%.

Q.23 What are the advantages of SF_6 circuit breaker?

Q.24 Discuss the phenomenon of arc formation in circuit breaker.

Q.25 What are the properties of lightning arrestor?

Q.26 Explain the working of Buchholz relay.

Q.27 Explain the differences between switch, isolator and circuit breaker.

Q.28 Distinguish between earth wire and neutral wire.

Q.29 Write a short note on block rate tariff.

Q.30 What is the purpose of inserting a resistance between horn-gap arrestor and line?

Q.31 Discuss the function of power line carrier communication.

Q.32 What is the differences between system earthing and equipment earthing?

Q.33 Discuss various types of air blast circuit breaker.

Q.34 Draw and explain the components of a MCB.

Q.35 Explain how we can protect transmission lines and substation over-voltages.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Describe in detail the Merz-price system of protection for a 3-phase star-delta transformer.

Q.37 With the help of neat diagram, explain the construction and working operation of induction type non-directional over current relay.

Q.38 Explain construction, principle and working of thermal relays with the help of neat diagram.