

- Q.26 Mention the various applications of static relay.

Q.27 Make a diagram of electromagnetic relay and explain its working.

Q.28 What is HRC fuse. Explain in brief the principle and working of HRC fuse.

Q.29 Draw a neat sketch of an induction type over current relay and describe its operation.

Q.30 What are the various types of faults on overhead transmission line.

Q.31 Explain the impedance protection scheme.

Q.32 What are the various faults that would affect an alternator?

Q.33 Write a short note on protection of electrical system against under frequency.

Q.34 what is surge absorber? How do they differ from surge diverter?

Q.35 Discuss the protection of electrical system against under voltage.

Section-D

Note: Long answer 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 Explain various methods of earthing with neat diagram.

Q.38 What is the role of feeder in a power system. Discuss various methods of protection of a feeder.

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Power Station Engg.
Subject : Electrical Protection

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 What percentage of Fault occurring in the power system in line-to-line fault.

a) 5% b) 30%

c) 25% d) 15%

Q.2 The Burchholz relay is used for the protection of transformer against

a) External faults b) Internal faults

c) Both A & B d) None of the above

Q.3 The fuse rating is expressed in terms of

a) Current b) Voltage

c) VAR d) KVA

Q.4 Surge protection can't be implemented by addition of rod gaps

a) True b) False

Q.5 In current transformer, the number of primary turns is always

a) Less than the number of secondary turns

- b) Zero
c) More than the number of secondary turns
d) Equals the number of secondary turns
- Q.6** Surge absorbers are used for protection against
a) High voltage low frequency oscillations
b) Low-voltage low frequency oscillations
c) low - voltage high frequency oscillations
d) High - voltage high frequency oscillations
- Q.7** Distance relay are Generally
a) Impedance type b) MHO type
c) Reactance type d) All of above
- Q.8** The relay used for feeder protection is :
a) under voltage relay b) Translay relay
c) Thermal relay d) Buchholtz relay
- Q.9** Wave trap is used to trap waves of
a) Power frequencies
b) Higher frequencies entering generator or transformer units
c) Either of the above
d) None of the above
- Q.10** A thyrite lightning arrester has
a) Inverse resistance characteristics
b) A gap
c) Efficient earthing
d) A combination of inverse resistance characteristics and gap

Section B

Note: Objective types Questions. All Questions are compulsory. (10x1=10)

- Q.11 Faults occurs because of _____ failure.
Q.12 What is the purpose of fuse.
Q.13 Double line fault is a type of _____ fault.
Q.14 Define Earthing.
Q.15 HRC meant for _____.
Q.16 What is fault.
Q.17 Voltage in single phase is _____ Volts.
Q.18 The fusing factor is always greater than one. (True/False)
Q.19 A Buchholz relay operates on the principle of _____.
Q.20 A lightning arrestor is connected between _____ and _____.

Section-C

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

- Q.21 What are the external causes of over voltages in a power system.
Q.22 Differentiate between symmetrical and unsymmetrical faults.
Q.23 Discuss working Function of Wave Trap & Purpose of Line Trap.
Q.24 Explain the principle of Rod gap lighting arrester.
Q.25 Write the major difference between PT and CTV.