## SECTION-C

**Note:** Long answer type questions. Attempt any three questions. 3x10=30

Q.3 Give various schemes of protection for feeders and compare their performance.

Q.4 Describe the construction, principle of operation and applications of valve type lightning arrester.

Q.5 Describe the construction, principle of operation and applications of electromagnetic relay.

Q.6 Explain the following:

a) Single line to ground fault

b) Double line to ground fault

Q.7 Write short notes on any two

a) Distance protection for transmission system

b) CVT

c) Relays for generator protection



No. of Printed Pages : 4
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**6th Sem. / PSE**

**Subject : Electrical Protection**

Time : 3 Hrs. M.M. : 100

## SECTION-A

**Note:** Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) What do you mean by lightning?

b) Define short circuit.

c) CVT stands for _____.

d) What is the function of the fuse?

e) Give one application of relay.

f) What is three phase supply?

g) Give one drawback of horn gap.

h) Give two causes of overvoltage.

i) When an HRC fuse operate, the element absorb _____ from the circuit and heats until it melts.

j) The overcurrent relay, even though simplest of all types of electromechanical relays, are the most difficult static relay. (True/False).

k) What is the function of distance relay?

l) What is substation?

m) What is the role of earth wire?

n) Define transmission line.

o) Name the relay used for generator protection.

p) Name the two types of potential transformer.

q) Give one advantages of Directional relay.

r) Define fault.

## SECTION-B

**Note:** Short answer type questions. Attempt any ten parts 10x4=40

Q.2 i) What do you understand by unsymmetrical faults?

ii) Explain the basic concept of CT.



iii) What do you understand by fuse rating?

iv) Explain the function of differential relay.

v) Explain the basic concept of earth fault relay.

vi) Explain the function of thermal relay.

vii) Explain the concept of over frequency protection.

viii) Differentiate between lighting arrester and lightening conductor.

ix) Give a scheme of protecting a transmission line against overvoltages and lightning?

x) What are the requirements of a ground wire for protecting power conductors against direct lightening stroke?

xi) Describe the construction of HRC fuse.

xii) What is protective relay?

xiii) What is PLCC?

xiv) Classify the various types of overcurrent relay.

xv) Discuss the relays for transformer protection?