

Question Bank (K- scheme)

Unit Test I

Name of Course: SWITCH GEAR AND PROTECTION

Course code: (315334)

Course - SGP

Semester: V

Programme: EE

UNIT I: FUNDAMENTALS OF PROTECTION (12 M)

2 Marks Questions:

- 1) Classify current limiting reactors based on location.
- 2) Differentiate between symmetrical and unsymmetrical faults .(any two points)
- 3) State the function of current limiting reactor.
- 4) State the difference between normal and abnormal conditions in power system.
- 5) State four functions of protective system.
- 6) What is main protection & back up protection?
- 7) List various switchgears in a LV supply system.

4 Marks Questions:

- 8) With the help of suitable diagram explain the importance of back-up protection.
- 9) Explain in brief four causes of faults in the power system.
- 10) With a neat diagram explain generator reactors.
- 11) Draw basic trip circuit and explain in brief.
- 12) Draw S.L.D. of a line terminating in switchyard showing important switchgears.

UNIT II: CIRCUIT INTERRUPTING DEVICES (16M)

2 Marks Questions:

- 13) Define i) making capacity ii) short time rating of circuit breaker.
- 14) List any two advantages and two disadvantages of vacuum circuit breaker.
- 15) State the factors to be considered while selecting MCCB for motor protection.
- 16) State the need of insulation coordination.
- 17) Draw Time-Current characteristics of fuse and explain briefly.
- 18) Explain briefly operating principle of H.T. Circuit breaker.
- 19) Classify the H.T. Circuit breakers.
- 20) What is R.M.U. ?

4 Marks Questions:

- 21) Define the following terms related to current interrupting devices: i) arc voltage, ii) re-striking voltage, iii) recovery voltage and iv) RRRV
- 22) Compare HRC fuse and Circuit breakers as interrupting devices on any four points.
- 23) Describe with neat sketch the arc extinction in SF6 circuit breaker.
- 24) Define following terms related to CB:
 - i) Rated normal current
 - ii) Rated breaking current:
 - iii) Short time rating
 - iv) Symmetrical breaking current
- 25) With the help of neat sketch explain the working of ELCB.
- 26) Compare the MCCB with ELCB on any three points. State the application of the RCBO.
- 27) Explain with neat sketch pantograph type of isolator. State the sequence of operation of isolator, CB and earthing switch while opening and closing.
- 28) Which are ARC extinction methods, explain any one.
- 29) Explain construction and working of Vacuum Circuit Breaker.
- 30) Compare SF6 Circuit breaker with Air blast Circuit breaker.