



Department of EEE

EE 8602 – Protection and Switchgear

Unit I - MCQ Bank

1. The most dangerous fault:

- A. **3 phase fault**
- B. Line to line fault
- C. Line to ground fault
- D. Double line to ground fault

Answer: A

2. Heavy current fuses have wires that are _____ in diameter than smaller ones:

- A. **Larger**
- B. Smaller
- C. Same
- D. Any of above

Answer: A

3. The pickup current of a relay having 125% current setting connected to 100/5 transformer is:

- A. 1 Amp
- B. 5 Amp
- C. **6.25 Amp**
- D. 10 Amp

Answer: C

4. _____ signals circuit breaker in case of fault:

- A. Fuse
- B. Isolator
- C. CT
- D. **Relay**

Answer: D

5. Buchholz relay is used for protection of:

- A. Busbar
- B. **Transformer**
- C. Alternator
- D. Motors

Answer: B

6. While short-circuit test on circuit breaker a protection engineer obtained following readings on single frequency transient:

Time to reach the peak re-striking voltage = 50 μ sec

Peak re-striking voltage = 150 kV

The average RRRV is:

- A. 2.5 kV/ μ sec
- B. 5 kV/ μ sec**
- C. 10 kV/ μ sec
- D. 50 kV/ μ sec

Answer: B

7. What is approximate value of the contact resistance of circuit breaker:

- A. 1.25 $\mu\Omega$**
- B. 2.25 m Ω
- C. 3.25 Ω
- D. 250 Ω

Answer: A

8. Which of the following voltage surge is more harmful: 1/50 μ s or 4/50 μ s:

- A. 1/50 μ s is more harmful**
- B. 4/50 μ s is more harmful
- C. Both are equally harmful
- D. Insufficient data provided

Answer: A

9. The major function of a fuse is to:

- A. Open the circuit
- B. Prevent excessive currents
- C. Both of these**
- D. None of these

Answer: C

10. Which of the following is correct statement about SF₆ gas:

- A. It is yellowish green in color
- B. It is nontoxic gas**
- C. Is lighter than air
- D. All of these

Answer: B

11. A fuse exhibits _____ time current characteristics:

- A. Inverse
- B. Direct**

Answer: A

12. A fuse performs:

- A. Detection function only
- B. Interruption function only
- C. Both of these**

D. None of these

Answer: C

13. Relays can be actuated by which of the below mentioned quantities:

- A. Magnitude
- B. Frequency
- C. Phase angle
- D. All of these**

Answer: D

14. In a circuit breaker the process of Ionization is facilitated by:

- A. High temperature
- B. Increasing field strength
- C. Both of these**
- D. None of these

Answer: C

15. Internally generated surges arise due to:

- A. Refrigerator compressor
- B. Printers
- C. Pumps and motors
- D. All of these**

Answer: D

16. A major short circuit fault when uncleared could ultimately lead to:

- A. Blowing of fuse
- B. Fire**
- C. Generation of harmonics
- D. High voltage drop

Answer: B

17. The term **SYSTEM EARTHING** means:

- A. Earthing the chassis
- B. Earthing the non-current carrying parts
- C. Earthing the system neutral**
- D. None of these

Answer: C

18. MOVs used in power system protection are best classified as:

- A. Conductors
- B. Insulators
- C. Semi-conductors**
- D. None of these

Answer: C

19. Plug setting of electromagnetic relays can be altered by varying:

- A. Air gap distance
- B. Spring tension
- C. Number of ampere turns**
- D. Adjustable back stop

Answer: C

20. An isolator is designed to open a circuit under:

- A. No load**
- B. Half load
- C. Full load
- D. Any of above

Answer: A

21. The active recovery voltage in a circuit breaker depends on:

- A. Circuit condition
- B. Armature reaction
- C. Power factor
- D. All of these**

Answer: D

22. Series reactors are used to:

- 1. Improve voltage regulation
- 2. Improve power factor
- 3. Bring down the level of fault**
- 4. Improve transmission efficiency

Answer: C

23. Which of following material is used in liquid fuses:

- A. Water
- B. SF₆
- C. Transformer oil
- D. Carbon tetra chloride**

Answer: D

24. In star connected system, without neutral ground, the zero sequence currents equal:

- A. RMS value of phase currents
- B. Peak value of phase currents
- C. Zero**

Answer: C

25. Which of the following can be employed as interrupting medium in a contactor:

- 1. Compressed air
- 2. Oil
- 3. SF₆ gas
- 4. Any of above**

Answer: D

26. Earth fault relays are directional relays:

- A. True
- B. False

Answer: A

27. In power system nearly 50% of faults occurs in

- A. Overhead line
- B. Transformer
- C. Generator
- D. Switchgear

Answer: A

28. Which of the following is non unit type of protection in transmission line?

- A. Pilot wire differential protection
- B. Phase comparison
- C. Carrier current protection
- D. Current graded over current protection

Answer: D

29. Which of the following is non unit type of protection in feeder?

- A. Balanced voltage system
- B. Circulating current system
- C. Translay relay system
- D. Distance protection

Answer: D

30. Pilot wire used in

- A. Non unit type of protection
- B. Unit type of protection
- C. Both A and B
- D. None of above

Answer: B

