



Department of EEE

EE8602 – PROTECTION AND SWITCHGEAR

Unit III - MCQ Bank

1. Which fault is related to power transformer?

- (A) Overheating of core
- (B) Earth fault
- (C) Phase to Phase fault
- (D) All of above**

Answer-D

2. Merz prize protection system is used for

- (A) Transformer
- (B) Alternator
- (C) Both A and B**
- (D) None of above

Answer-C

3. Merz prize protection system works on principle of

- (A) Current balance**
- (B) Voltage balance
- (C) Power balance
- (D) None of above

Answer-A

4. Which protection system is used for earth fault in power transformer?

- (A) Merz prize protection
- (B) Earth fault protection
- (C) Both A and B**
- (D) None of above

Answer-C

5. Which relay provide signal before the fault?

- (A) Buchholz relay**
- (B) Over current relay
- (C) Under current relay
- (D) None of above

Answer-A

6. Buchholz relay is used in protection of

- (A) Transformer**

- (B) Alternator
- (C) Induction motor
- (D) None of above

Answer-A

7. Which of the protection is provided by buchholz relay?

- (A) Short circuit in winding
- (B) Earth fault in winding
- (C) Local over heating
- (D) All of above**

Answer-D

8. Buchholz relay is used for transformer rating above

- (A) 100 KVA
- (B) 200 KVA
- (C) 400 KVA
- (D) 500 KVA**

Answer-D

9. Which of the abnormality possible in alternator?

- (A) Failure of prime mover
- (B) Overloading
- (C) Over voltage
- (D) All of above**

Answer-D

10. When exciter failed, alternator works as

- (A) Induction motor
- (B) Induction generator**
- (C) Transformer
- (D) None of above

Answer-B

11. Unbalance loading in alternator produce

- (A) Negative phase sequence current**
- (B) Positive phase sequence current
- (C) Both A and B
- (D) None of above

Answer-A

12. When load on alternator is suddenly reduced, voltage will be

- (A) Increase**
- (B) Decrease
- (C) Remain same
- (D) None of above

Answer-A

13. When load on alternator is suddenly reduced, speed will be

- (A) **Increase**
- (B) Decrease
- (C) Remain same
- (D) None of above

Answer-A

14.Failure of excitation of alternator will be sensed by

- (A) **Undercurrent relay**
- (B) Over current relay
- (C) Both A and B
- (D) None of above

Answer-C

15.In alternator, inter turn fault possible in

- (A) Stator
- (B) Rotor
- (C) **Both A and B**
- (D) None of above

Answer-C

16.Reverse running of alternator is due to

- (A) Over voltage
- (B) Over current
- (C) **Failure of prime mover**
- (D) None of above

Answer-C

17.Which of the abnormality possible in induction motor?

- (A) Single phasing
- (B) Short circuit
- (C) Stalling
- (D) **All of above**

Answer-D

18.Which protection system is used for bus bar?

- (A) Frame leakage
- (B) Circulating current
- (C) **Both A and B**
- (D) None of above

Answer-C

19.Bus coupler is very essential in the arrangement

- A. Single bus
- B. Double bus, double breaker
- C. **Main and transfer bus**

D. All of the above

Answer-C

20. The short circuit in any winding of the transformer is the result of

A. Mechanical vibration

B. Insulation failure

C. Loose connection

D. Impulse voltage

Answer-D

21. A mho relay is used for protection of:

A. Protection of a transformer against external fault

B. Long Transmission Line

C. Protection of a transformer against all the internal faults and external fault

D. Medium Length lines

Answer-B

22. For which of the following protection from negative sequence currents is provided?

A. Generators

B. Motors

C. Transmission line

D. Transformers

Answer-B

23. A relay which measures impedance or a component of the impedance at the relay location is known as

A. Induction Relay

B. Moving Coil Relay

C. IDMT Relay

D. Distance Relay

Answer-D

24. For which of the following ratings of the transformer differential protection is recommended?

A. Above 30 kVA

B. Equal to and above 5 MVA

C. Equal to and above 25 MVA

D. None of the above

Answer-C

25. A _____ is used to measure the stator % winding temperature of the generator

A. Thermocouple

B. Pyrometer

C. Resistance thermometer

D. Thermometer

Answer-D

26. The under voltage relay can be used for

A. Generators

B. Busbars

C. Motors

D. All of the above

Answer-D

27. The relay with inverse time is

- A. Directly proportional to the square of fault current
- B. Direct proportional to the of fault current
- C. Inversely proportional to the of fault current**
- D. Inversely proportional to the square of fault current

Answer.C

28. When the fault current is 2000 A, for a relay setting of 50% with CT ratio 500/5, the plug setting multiplier will be

- A. 16
- B. 12
- C. 4
- D. 8**

Answer-D

29. Which of the following devices will receive voltage surge first traveling on the transmission line?

- A. Lightning arresters**
- B. Relays
- C. Step-down transformer
- D. Switchgear

Answer.A

30. Which of the following parameter can be neglected for a short line?

- A. Inductance
- B. Capacitance**
- C. Resistance
- D. Reactance

Answer-B

31. Series reactors should have

- A. Low resistance**
- B. High resistance
- C. Low impedance
- D. High impedance

Answer.A

32. Which of the following circuit breakers has high reliability and minimum maintenance?

- A. Air blast circuit breakers
- B. Circuit breaker with SF6 gas
- C. Vacuum circuit breakers
- D. Oil circuit breakers

Answer-B

33. Arc in a circuit breaker is interrupted at

- A. Zero current**
- B. Maximum current

- C. Minimum current
- D. Hide Explanation

Answer-A

34. The transmission line has a reflection coefficient as one

- A. Open circuit**
- B. Short-circuit
- C. Long
- D. None of the above

Answer-A

35. What will be the reflection coefficient of the wave of the load connected to the transmission line if surge impedance of the line is equal to load?

- A. Zero**
- B. Unity
- C. Infinity
- D. None of the above

Answer-A

36. A Buchholz relay is used for

- A. Protection of a transformer against all internal faults.**
- B. Protection of a transformer against external faults.
- C. Protection of a transformer against both internal and external faults.
- D. Protection of induction motors.

Answer-A

37. Overvoltage protection is recommended for

- A. Hydro-electric generators**
- B. Steam turbine generators
- C. Gas turbine generators
- D. All of the above

Answer-A

38. In a thyrite lightning arrester the resistance

- A. Decrease linearly with the applied voltage
- B. Is high at low current and low at high current**
- C. Is low at low current and high at high current
- D. Increase linearly with the applied voltage

Answer-B

39. Over fluxing protection is recommended for

- A. Distribution transformer
- B. Generator transformer of the power plant**
- C. Auto-transformer of the power plant
- D. Station transformer of the power plant

Answer-B

40. Series capacitors are used to

- A. Compensate for line inductive reactance**
- B. Compensate for line capacitive reactance
- C. Improve line voltage
- D. None of the above

Answer-A

41. Admittance relay is _____ relay.

- A. Impedance
- B. Distance**
- C. Non-directional
- D. None of the above

Answer-B

42. The material used for fuse must have

- A. The low melting point and high specific resistance
- B. The low melting point and -low specific resistance**
- C. High melting point and low specific resistance
- D. Low melting point and any specific resistance

Answer-B

43. If the fault occurs near the impedance relay, the VI ratio will be

- A. Constant for all distances
- B. Lower than that of if the fault occurs away from the relay**
- C. Higher than that of if the fault occurs away from the relay
- D. None of the above

Answer-B

44. The torque produced in induction type relay (shaded pole structure) is

- A. Inversely proportional to the current
- B. Inversely proportional to the square of the current
- C. Proportional to the current
- D. Proportional to the square of the current**

Answer-D

45. The steady-state stability of the power system can be increased by

- A. Connecting lines in parallel**
- B. Connecting lines in series
- C. Using machines of high impedance
- D. Reducing the excitation of machines

Answer-A