Question 16

Answer saved

Marked out of 2

The apparent impedance calculated by a distance relay is 0.6158+j8.603 ohm. If the positive sequence impedance of the line is 0.02+ j0.28678 ohm/km, What is the distance of fault?

Select one or more:

- [ ] a. 40 km
- [x] b. 30 km
- [ ] c. 25 km
- [ ] d. 20 km

Question 17

Answer saved

Marked out of 2

For the transmission line protection experiment using distance relay for a fault in the line end the relay did not generate trip signal because

Select one or more:

- [x] a. it was beyond Zone-1 setting
- [ ] b. It was within zone-1 setting
- [ ] c. One of three CTs saturated
- [ ] d. the power factor angle during fault was high

Question 18

Answer saved

Marked out of 2

The specifications of the voltage current sensors in a system are: PT_{ratio} =132kV/110 V, CT_{ratio} =500:1 A. If the apparent impedance (Zapp) computed by the distance relay using secondary signals is 58.5 ohm. Corresponding impedance referred to primary side in ohm is equal to

Select one or more:

- [ ] a. 5850
- [ ] b. 24.38
- [ ] c. 58.5
- [x] d. 140.4

Question 19

Answer saved

Marked out of 2

In the distance relay laboratory experiment, line-to-line voltage and positive sequence current measured by the relay for the phase-A-to-ground fault are 420 V and 2.7 A respectively. The apparent impedance calculated by the relay will be

Select one or more:

- [ ] a. 155.56 Ω
- [ ] b. 29.94 Ω
- [ ] c. 51.85 Ω
- [x] d. 89.81 Ω

Question 20

Answer saved

Marked out of 2

In the distance relay laboratory experiment, the relay has generated trip signal in 24 ms and the fault cleared in 65 ms following fault inception. What is the circuit breaker opening time?

Select one or more:

- [x] a. 41 ms
- [ ] b. 89 ms
- [ ] c. 65 ms
- [ ] d. 24 ms

Question 21

Answer saved

Marked out of 2

For 100% relative humidity, wet-bulb temperature is always

Select one or more:

- [ ] a. All these possibilities may exist
- [x] b. Equal to dry-bulb temperature
- [ ] c. Greater than dry-bulb temperature
- [ ] d. Less than dry-bulb temperature

Question 22

Answer saved

Marked out of 2

Sphere-gap method for measuring the peak value of AC sinusoidal voltage is influenced by

Select one or more:

- [ ] a. Relative humidity
- [ ] b. None of these
- [x] c. Atmospheric temperature and pressure
- [ ] d. illumination

Question 23

Answer saved

Marked out of 2

Small sphere-gaps in every stage of a Marx generator are used for

Select one or more:

- [x] a. All of these
- [x] b. Triggering the generator
- [x] c. To charge the load capacitor
- [x] d. Connecting the source capacitors in series

Question 24

Answer saved

Marked out of 2

Water-column resistance is used in series with the secondary of HV testing transformer

Select one or more:

- [x] a. To limit the current during discharge in the gap
- [ ] b. To mitigate the issues of poor design in transformer
- [ ] c. For user safety
- [ ] d. To control the voltage to be applied across the gap

Question 25

Answer saved

Marked out of 2

Which one is true for parameters of an impulse voltage generator

Select one or more:

- [ ] a. Tail resistance is very low compared to front resistance
- [x] b. Tail resistance is always greater than front resistance
- [ ] c. All of these
- [ ] d. Tail resistance is equal to front resistance

Question 26

Answer saved

Marked out of 2

For improved quality impulse voltage, which source voltage could be considered significant

Select one or more:

- [x] a. Any of these
- [ ] b. Single-phase half-wave rectifier output voltage
- [ ] c. DC voltage source
- [ ] d. Single-phase full-wave rectifier output voltage

Question 27

Answer saved

Marked out of 2

Corona is well-visible in a sphere-gap arrangement for the following cases:

Select one or more:

- [ ] a. It's independent of gap-distance
- [ ] b. When corona appears at a very low voltage
- [ ] c. When the gap distance is very small
- [x] d. When the gap distance is relatively large

Question 28

Answer saved

Marked out of 2

Why resistive voltage divider is used in impulse voltage generator

Select one or more:

- [x] a. All of these
- [x] b. To play the role of tail-resistance
- [x] c. To measure the impulse voltage in oscilloscope
- [x] d. To remove oscillation during tail-portion of the wave

Question 29

Answer saved

Marked out of 2

For a sphere-gap, critical flashover voltage is determined by

Select one or more:

- [x] a. 50% probability of breakdown
- [ ] b. None of these
- [ ] c. 100% probability of breakdown
- [ ] d. Any probability between 30% and 90% for breakdown

Question 30

Answer saved

Marked out of 2

For a 1.2/50 µs lightning impulse voltage

Select one or more:

- [ ] a. Rise time = 50 µs
- [ ] b. Rise time constant = 1.2 µs
- [ ] c. Fall time = 1.2 µs
- [x] d. Rise time = 1.2µs

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