

Unit 5 - Week 4

Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

 Islanding Detection Techniques-I

 Islanding Detection Techniques-II

 Islanding Detection Techniques-III

 Smart Grid Protection-I

 Smart Grid Protection-II

 Quiz : Assignment 4

 Solutions for Assignment - 4

Week 5

Week 6

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Week 8

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WEEKLY FEEDBACK

Assignment 4

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-08-28, 23:59 IST.

1) IEEE 1547 standard mandates that islanding condition should be detected in _____secs

1 point

- 1
 5
 3
 2

No, the answer is incorrect.
Score: 0

Accepted Answers:
2

2) For the detection of islanding, set point for voltage relays is

1 point

- OVR-1.05pu; UVR-0.95
 OVR-1.1pu; UVR-0.9
 OVR-1.1pu; UVR-0.88
 OVR-1.2pu; UVR-0.8

No, the answer is incorrect.
Score: 0

Accepted Answers:
OVR-1.1pu; UVR-0.88

3) Drawbacks of the rate of change of frequency

1 point

- Requires a Minimum power mismatch of 25%
 Effected by types of loads
 Effected by generator inertia constant
 All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of the above

4) Voltage ripple based passive islanding detection technique is applicable to microgrid with

1 point

- Diesel engine based DGs
 Micro hydro turbine DGs
 Photovoltaic DGs
 Any of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Photovoltaic DGs

5) For a positive power mismatch condition the super imposed negative sequence impedance is

1 point

- Positive
 Negative
 Zero
 None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Negative

6) Q-axis current injection causes sinusoidal component to exist in _____during islanding condition

1 point

- D-axis voltage
 Q-axis voltage
 Frequency
 Voltage

No, the answer is incorrect.
Score: 0

Accepted Answers:
Frequency

7) The dynamic level of fault current depends on the

1 point

- DGs
 Loads
 a and b
 none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
DGs

8) The phenomenon of blinding of protection can be represented mathematically as -
Where I_{gf} = Fault current with DG and I_f =Fault current without DG

1 point

- $I_{gf} = I_f$
 $I_{gf} < I_f$
 $I_{gf} > I_f$
 None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $I_{gf} < I_f$

9) The fault current contribution of Inverter based DER and synchronous based DER can be approximated as

1 point

- 5 pu and 2 pu respectively
 5 pu and 5 pu respectively
 2 pu and 5 pu respectively
 2 pu and 2 pu respectively

No, the answer is incorrect.
Score: 0

Accepted Answers:
2 pu and 5 pu respectively

10) Choose the superimposed fault current component from the following :

1 point

Where I_{1f} is positive sequence fault current, I_{2f} is negative sequence fault current and I_{1pre} is pre fault current

- $I_{1f} - I_{1pre}$
 $I_{1f} + I_{1pre}$
 $I_{1f} + I_{2f}$
 None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $I_{1f} - I_{1pre}$