

## Unit 4 - Week 3

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## Assignment 3

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

**Due on 2020-10-07, 23:59 IST.**

1) Figure 1 shows the single line diagram of a portion of a radial distribution system. The plug setting (PS) of  $R_3 = 75\%$  of CT secondary. The TDS of  $R_3 = 0.1$ . The normal range of PS is 50–200% of 1 A in seven equal steps, whereas the TDS setting range is 0.1 to 1 in steps of 0.05. The PS of the relays  $R_1$  and  $R_2$  will be

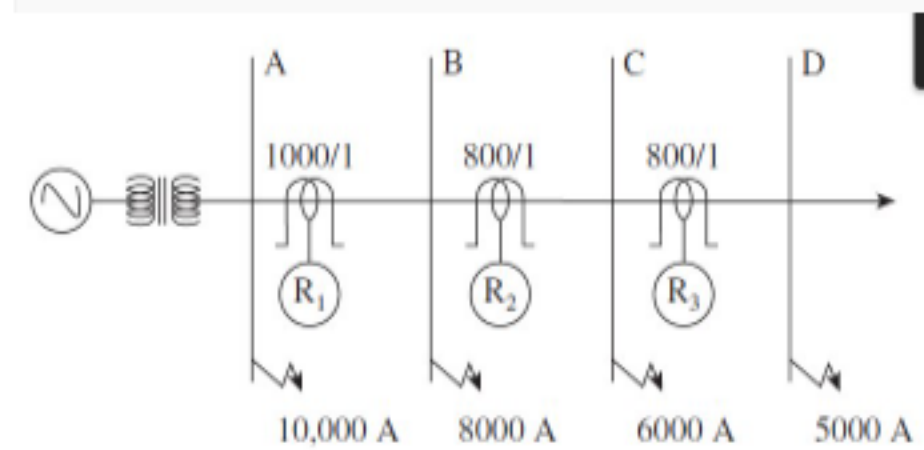


Fig.1 Single line diagram of radial distribution system

- 75% and 100% of relay rating, respectively  
 100% of relay rating for both  
 100% and 75% of relay rating, respectively  
 75% of relay rating for both

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
100% of relay rating for both

2) The above Fig. 1 shows the single line diagram of a portion of a radial distribution system. The PS of  $R_3 = 75\%$  of CT secondary. The Time Dial Setting (TDS) of  $R_3 = 0.1$ . The normal range of PS is 50–200% of 1 A in seven equal steps, whereas the TDS setting range is 0.1 to 1 in steps of 0.05. If the coordination time interval between any two relays is 0.25 s, then the TDS of relay  $R_2$  is

- 0.1  
 0.15  
 0.2  
 0.3

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
0.2

3) In case of phase fault, the maximum torque is achieved in directional relay by

- 30° connection  
 60° connection  
 90° connection  
 none of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
90° connection

4) Directional relay is required at a location/bus when

- load is very high  
 load is very low  
 there are chances of reversal of fault current  
 none of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
there are chances of reversal of fault current

5) Directional relay does not operate properly during

- remote end fault  
 middle end fault  
 close-in fault  
 none of these

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
close-in fault

6) Distance relay is set based on the

- positive sequence impedance of line  
 negative sequence impedance of line  
 zero sequence impedance of line  
 none of these

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
positive sequence impedance of line

7) The zone of distance relay that is affected by the transient overreach phenomenon is

- first zone  
 second zone  
 third zone  
 none of these

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
first zone

8) Which zone of distance relay is affected by extreme loading conditions (also known as load encroachment phenomena)

- first zone  
 second zone  
 third zone  
 none of these

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
third zone

9) Which of the following relay respond best in case of fault with significant fault resistance

- impedance relay  
 reactance relay  
 mho relay  
 quadrilateral relay

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
quadrilateral relay

10) Which of the following relay do not require separate directional element?

- impedance relay  
 reactance relay  
 mho relay  
 all of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
mho relay