



COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electrical & Control Engineering

Lecturer: Dr. Ahmed Lotfy.

Course : Power System Protection (1)

Starting Time: 09:00

Course Code: EE442 Ni

Marks: 40

Date : 31 / 05 / 2015

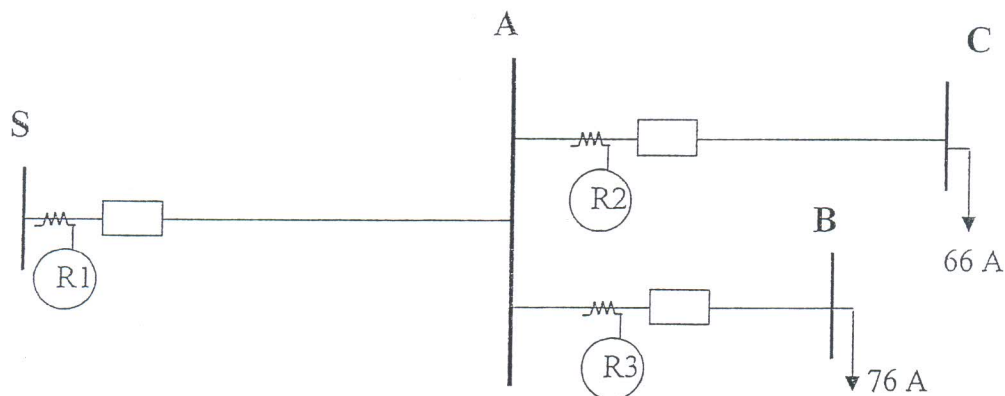
Time: 2 hours

Final Examination Paper

Answer the following questions:

- The shown distribution system uses **200:5** current transformers to operate directional time delay over-current relays **R1**, **R2** and **R3**.
 - Check if this current transformer is a suitable choice for relay **R1**
 - Select suitable settings for time delay over-current relays **R2** and **R3**, and then find out their response times for the given down stream faults.
 - Set relay **R1** as backup and check its response for local fault levels at "A".

	A	B	C
Minimum short circuit (A)	1000	580	450
Maximum short circuit (A)	1200	750	600



[A4, B17] (13 Marks)

- Use illustrative and labeled drawings to show the construction of an induction disc type over-current relay.

[A8] (5 Marks)

- Is the type of signal used with directional comparison distance protection scheme a tripping or a blocking signal? **Give reason** for your answer.

[A8] (2 Marks)

Members of course Examination Committee:	Signature of Members of course Examination Committee:	Date:
Lecturer: Prof. Ahmed Lotfy	<i>[Signature]</i>	12/5/2015
Course Coordinator: Prof. Amany ElZonkoly	<i>[Signature]</i>	19/5/2015
Head of Department: Prof. Hamdy Ashour	<i>[Signature]</i>	19/5/2015

