Roll No.:.....

National Institute of Technology, Delhi

Name of the Examination: B. Tech.

Branch	**: Electrical & Electronics Engg.**	**Semester**	**: 6th**
Title of the Course	**: Switch Gear and Protection**	**Course Code**	**: EEL 352**

Time: 2 Hours **Maximum Marks: 25**

Note : 1. Answer all the questions.

2. Each question carries 5 marks.

4. Do not write anything on the question paper except Roll number

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1. **Explain the scheme and working of wheatstone bridge type negative and zero sequence relay.**

2. **Explain the construction and working of Reactance and Mho relays. What are the disadvantages of each relay.**

3. **Derive the torque equation of directional relay. Explain any one directional over current relay connection used for three phase systems.**

4. **Explain solid, resistance and Peterson coil grounding schemes.**

5. **Figure shows a radial distribution system having identical IDMTL over-current relay at A, B and C. For a time delay step of 0.5 second, Calculate the time multiplier settings at A and B**

PSM	2	3	5	10	20
Time (seconds)	10	6	4.5	3	2

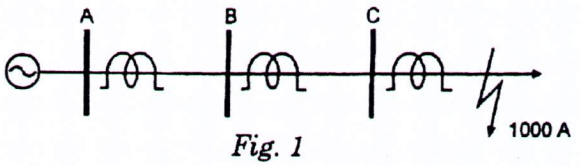

Fig. 1

C T Ratios	200/5	200/5	100/5
Plug setting current	5 A	2.5 A	2.5 A
Time multiplier setting	—	—	0.1