

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER-I EXAMINATION – WINTER 2014

Subject Code:2710707

Date:12/01/ 2015

Subject Name: Advanced Power system Protection and switchgear

Time:

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Draw and explain basic block diagram for a generalized digital relay **07**
(b) Explain concept of sampling and data window used for digital relays **07**
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- Q.2** (a) What do you mean by -Relay co-ordination? Explain how relay co-ordination is **07**
achieved in case of IDMT relays used for interconnected systems.
(b) Draw flow chart for primary/backup relay pair determination **07**
)
- OR**
- (b) Explain load shedding scheme for external fault. **07**
)
- Q.3** (a) What is Wide area protection? Explain architecture of wide area protection. **07**
(b) Explain wide area phasor measurement technology. **07**
)
- OR**
- Q.3** (a) Discuss frequency response during overload. **07**
(b) Explain briefly the criteria which must be considered during design of load **07**
) shedding scheme.
- Q.4** (a) Discuss advantages of auto reclosing. **07**
(b) What are factors to be considered during reclosing? **07**
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- OR**
- Q.4** (a) Explain -Synchronism check in relation to auto reclosing **07**
(b) Explain working of single shot solid state reclosing relay **07**
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- Q.5** (a) What is islanding? Discuss issues with islanding and list methods of islanding **07**
detection.
(b) Discuss nature of system response to severe upsets. **07**
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- OR**
- Q.5** (a) Explain concept of adaptive relaying. **07**
(b) Explain relaying problems associated with series compensated lines **07**
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