

GUJARAT TECHNOLOGICAL UNIVERSITY**ME - SEMESTER– I (New course)• REMEDIAL EXAMINATION – SUMMER 2015****Subject Code: 2710707****Date:15/05/2015****Subject Name: Advanced Power system Protection and switchgear****Time: 10:30 am to 1:00 pm****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) Compare digital relays with previous generation relays 07
(b) Explain in detail two sample window used for digital relaying 07
- Q.2** (a) Discuss issues related to over current relay co-ordination in interconnected power system. 07
(b) Why anti aliasing filter is used in digital relays? Explain its working. 07
- OR**
- (b) Discuss process to determine plug setting of IDMT over current relays to co-ordinate it with interconnected system. 07
- Q.3** (a) What is the need of Wide area protection? What are WAMS? Explain in brief. 07
(b) What is synchronized sampling? Why is it required? Explain in brief. 07
- OR**
- Q.3** (a) Write a brief note on adaptive relaying 07
(b) Explain following terms with reference to Reclosing relay. 07
(1) Instantaneous-Trip Lockout.
(2) Deionizing time for three-pole reclosing.
(3) Selective reclosing.
- Q.4** (a) Why reclosing is important in case of interconnected power system? Explain auto reclosing and its advantages. 07
(b) Classify auto reclosing relays in detail. 07
- OR**
- Q.4** (a) Discuss importance of choice of zone and reclaim time in case of auto reclosing. 07
(b) Discuss phasing voltage method and angular method for synchronism check 07
- Q.5** (a) What is the difference between islanding and load shedding? Discuss importance of each in case of interconnected power system. 07
(b) Write a brief note on Frequency relays 07
- OR**
- Q.5** (a) Discuss methods of islanding and issues related islanding. 07
(b) Write a short note on Issues related to protection of series compensated transmission line. 07
