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Total No. of Pages : 02

Total No. of Questions : 08

M.Tech.(EE) (2013 Batch) (Sem.-2)
ADVANCED RELAYING AND PROTECTION
Subject Code : MTEE-202
M.Code : 71357

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- Q1. (a) What are important terminology used in protective relaying? Brief them.
- (b) Design factor affecting performance of a protective scheme.
- (c) What are differences between static and digital numerical relaying?
- (d) What are importance of instrument transformers?
- Q2. A 3 phase alternator has the line voltage of 11KV. The generator is connected to a C B. The inductive reactance up to the CB is 5 Ohm/ phase. The distributed capacitance up- to CB between phase and neutral is 0.01 micro F. Determine :
- (a) Peak re-striking voltage across the CB
- (b) Frequency of restriking voltage transient
- (c) Maximum RRRV.
- Q3. (a) Compare the principle of directional, current and differential relaying protection.
- (b) Explain the characteristics of distance relaying in power system.
- Q4. A 3 phase, 2 pole, 11KV, 10 MVA alternator has neutral earthed through a resistance of 7 Ohm. The machine has current balance protection which operates at out of balance current exceeding 20 % of full load. Determine % of winding protected against earth fault.
- Q5. (a) Draw and explain various protection schemes for a motor.
- (b) Explain the methods for bus bar protection using digital scheme.

- Q6. (a) What are basic elements of digital protection scheme implementation?
(b) Write important software programs (flowcharts) required for load shading.
- Q7. (a) Explain methods of testing of relaying system.
(b) Explain hardware and software for implementation of digital data transmission.
- Q8. Write short notes :
- (a) SCADA system
 - (b) Frequency relaying
 - (c) IDMT Characteristics
 - (d) Pilot wire.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.