

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. (Power System) (2018 Batch) (Sem.-2)
DIGITAL PROTECTION OF POWER SYSTEM
Subject Code : MTPS-202-18
M.Code : 76133

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.

2. Each question carries TWELVE marks.

- 1) Explain performance and operational characteristics of digital protection. What are algorithms used for digital protection relays?
- 2) a) Calculate the value of function $F(x) = 1/\sqrt{x}$ at $x = 3.5$ using forward difference table. For table take value of x from 1 to 6.
b) Use the least square to fit a straight line for the points (1,14), (2,27), (3,40), (4,55) and (5,68).
- 3) Explain basic elements of a digital protection scheme.
- 4) What are the basis of discrimination of inrush current and internal fault current of transformer and how it can be done in digital protection scheme for transformer?
- 5) Give algorithm to predict peak or squared peak of compared waveforms.
- 6) What are the problems in protection of long and heavily loaded two or multi-terminal lines? Explain any current based differential protection scheme.
- 7) For analog to digital conversion for digital protection scheme explain counter - controlled converter and Dual slope converter.
- 8) Explain basic principle and develop walsh function based algorithm.

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.