

(2)

- Q.5 Star-delta, 11 kV/6.6 kV transformer is protected by means of differential protection system. The 6.6 kV delta connected side has CT of ratio 600/5. Calculate CT ratio of HI' side.
- Q.6 Describe the principle of bus bar protection based on voltage differential systems. How does it respond to saturation of CT's for external fault and internal fault?
- Q.7 Describe with the help of neat sketches the set-up of carrier current relaying employed in transmission line protection.
- Q.8 Write short note on any two of the following :
- Static over current relay.
 - Static differential protection of power transformer.
 - Static bus protection based on directional comparison principle.

[Total No. of Questions: 8]

[Total No. of Printed Pages :2]

Enroll No.....

EE-102

M.Tech. (PS)–I Sem. (Reg./Ex.)

Examination, March.-2021

Advance Power System Protection Relays

Time: Three Hours

Maximum Marks:70

Note: Attempt any five questions. (Each question carries equal marks)

- Q.1 State the various applications of over-current relaying. Distinguish between inverse characteristics and definite characteristics. Explain the time-setting and plug-setting in an induction type over-current relay.
- Q.2 Derive expressions for the torque developed by a double activating quantity distance relay. Show that the relay operates when fault is within the protected distance of line.
- Q.3 Explain the principle of distance relaying applied to protection of radial transmission line. Distinguish between reactance, impedance and mho relays as their application to distance protection.
- Q.4 Explain the principle of differential system of protection applied to a power transformer. What are the difficulties experienced and how they can be resolved?