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Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. (Power System) (2018 Onwards) (Sem.-1)

FACTS AND CUSTOM POWER DEVICES

Subject Code : MTPS-104D-18

M.Code : 75789

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. Which parameters of a transmission line can be controlled by using FACTS controllers? Also list the benefits of FACTS controllers.
2. Classify FACTS Controllers and draw schematic diagrams of all categories of FACTS controllers.
3. Discuss the working of a TCSC. Prove that the thyristor rating is decided based on maximum limit on XTCSC for the inductive operation.
4. How the V-I curve of a combined system when STATCOM is connected with (i) TCR and (ii) TSC will change? Draw the modified characteristics for each case.
5. Discuss basic principle of independent control of P and Q. Explain where independent control of P and Q is required.
6. Write various steps involved in simulation of FACTS controllers.
7. Define voltage sags, swells, flicker and unbalance. Provide mitigation technique for each of these power quality issues.
8. Write short notes on the following :
 - a) SSR and its damping
 - b) GCSC

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