

APJ Abdul Kalam Technological University
Second Semester M. Tech Degree Examination, May 2016

Cluster: **Kollam**

Branch: Electrical & Electronics Engineering

Specialisation: Power Systems

Subject: **02EE6242.2 FACTS AND CUSTOM POWER**

Time: 3 Hrs

Max. Marks: 60

PART A

(Answer All Questions)

1. Give the complete analysis of lossless distributed parameter transmission lines and derive power equation.
2. Explain the role of SVC in the enhancement of power transfer capacity of transmission line.
3. Explain the basic construction, working and characteristic of TCSC.
4. Explain the concept of voltage and phase angle regulators.

(4 x 9=36)

PART B

(Answer Any Two from each question)

5. (a) With a neat block diagram, explain the variable reactance modelling of TCSC.(6)
(b) With a neat block diagram, Explain the implementation of UPFC by two back to back voltage sourced converters.(6)
(c) Explain the basic operating principle of UPFC.(6)
6. (a) Explain the configurations of UPQC.(6)
(b) What is meant by custom power? Write short notes on network reconfiguring devices.(6)
(c) Explain load compensation using DSTATCOM.(6)

(2 x 12=24)
