

Roll No.

23260

M. E./M. Tech. 1st Semester (EE - EPS)

Examination – June, 2013

**REACTIVE POWER COMPENSATION AND
MANAGEMENT**

Paper : MTEPS-104

Time : Three hours]

[Maximum Marks : 100

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any five questions. All questions carry equal marks.

1. What do mean by reactive power compensation ?
Explain its objectives and main characteristics.

2. Explain the following :
 - (i) Load compensator as a voltage regulator.
 - (ii) Application of power factor correction of unsymmetrical loads.

23260-100-(P-2)(Q-8) (13)

P. T. O.

3. Explain the state reactive power compensation in transmission system with suitable examples.
4. Explain the following :
 - (i) Application of passive shunt compensation,
 - (ii) Passive shunt compensation.
5. Define Reactive power coordination and explain its Mathematical modeling used in reactive power coordination.
6. Explain the role of KVAR based tariffs penalties for voltage flickers in demand side management.
7. Define different loss reduction methods used in decrease in system losses at time of Distribution side Reactive power Management.
8. Define the following :
 - (i) Explain the KVAR requirements for domestic appliances .
 - (ii) Explain remedial measures -power factor of an arc furnace.