M. Tech. 2nd Semester Electrical Power Systems

Examination, May–2015

INSULATION TECHNOLOGY

Paper–MTEPS-205 (ii)

Time allowed : 3 hours] *[Maximum marks : 100*

Note : *Attempt any **five** questions out of given eight. Every question carry equal marks i.e. 20*

1. (a) Explain the electrical properties of insulating materials.

(b) Explain the dependency of permittivity on temperature and pressure. Use mathematical interpretation for the same.

2. (a) Explain the concept of dielectric strength and dielectric loss.

(b) Explain the concept of permittivity of mixtures.

3. (a) What is gaseous discharge ? How electric field is instrumental in such processes ?

(b) State and explain Townsend's theory with the help of practical case study.

4. (a) Explain how gaseous discharge shows behaviour in vacuum.

(b) Explain the concept of breakdown in vacuum insulation.

5. (a) Explain how breakdown takes place in solid dielectrics.