Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (EE) (Sem.–7)

EXTRA HIGH VOLTAGE ENGG.

Subject Code : EE-416

M.Code : 57062

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) Why bundled conductors are used in EHV transmission?

b) Define disruptive critical voltage.

c) What are the advantages of HVDC transmission?

d) Why dielectric losses occur in insulating material?

e) What happens when a high voltage is applied to a gaseous dielectric?

f) Differentiate pure and commercial liquids.

g) How tracking can be prevented in solid dielectrics?

h) What is the working principle of Van de Graff generator?

i) What is difference between type test and routine test?

j) What is internal partial discharge?

SECTION-B

2. Write a note on applications of insulating materials in power transformers and rotating machines.

3. What do you know about converter station equipment and their characteristics?

4. Write a note on generation of impulse currents.

5. Explain with diagrams, different types of rectifier circuits for producing high D.C. voltages.

6. How cables are tested in H.V. Engineering labs?

SECTION-C

7. Write a note on :

   a) Insulation co-ordination

   b) Corona loss and factors affecting the corona loss

8. Write a note on :

   a) Streamer theory of breakdown

   b) Various breakdown mechanism of solids

9. Explain the various theories that explain breakdown in commercial liquids dielectrics.

NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC case against the Student.