

**M. Tech.-IV (Electrical -Power System) (CBCS – 2015 Course) :**  
**SUMMER - 2019**

**Subject: Self-Study Paper-II High Voltage Insulation System & Design**

Day : Thursday  
Date: 13/06/2019

**S-2019-3557**

Time : 11.00 AM TO 02.00 PM  
Max., Marks: 60

**N.B.**

- 1) All Questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SAME** Answer book.
- 4) Assume suitable data if necessary.

**SECTION - I**

**Q.1** How conduction and breakdown in gas dielectrics takes places ? **(10)**

**OR**

How breakdown in Liquid dielectrics takes place? **(10)**

**Q.2** Explain techniques of generation of impulse voltage. **(10)**

**OR**

How to measure high AC voltages? **(10)**

**Q.3** Explain applications of insulating materials in power transformer. **(10)**

**OR**

Explain applications of insulating materials in rotating machines. **(10)**

**SECTION - II**

**Q.4** Explain difference between internal discharge and surface discharge. **(10)**

**OR**

Explain partial discharge characteristics. **(10)**

**Q.5** Explain different causes of over voltages in power system. **(10)**

**OR**

What is insulation co-ordination? **(10)**

**Q.6** What are different test facilities in HV laboratories? **(10)**

**OR**

How testing of power capacitors is done? **(10)**

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