

**R09**

**Code No: D5602**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**M.Tech II - Semester Examinations, March 2011**

**PARTIAL DISCHARGE IN HIGH VOLTAGE EQUIPMENT  
(POWER SYSTEMS HIGH VOLTAGE)**

**Time: 3hours**

**Max. Marks: 60**

**Answer any five questions  
All questions carry equal marks**

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1. Discuss the inception of internal discharges and their effects on the high voltage equipment. [12]
2. Explain the need for discharge detection? Explain different parameters on which the discharge detection depends upon? [12]
3. Explain electrical discharges at A.C. voltages, d.c.voltages and impulse voltages when applied to H.V. equipment. [12]
4. Explain how partial discharges in an insulation system or equipment can be detected and displayed by using straight detection method. [12]
- 5.a) State the differences between straight detection and balanced detection method in analyzing partial discharges of H.V. equipment.  
b) What are the various causes for interferences in measuring partial discharges?[12]
- 6.a) Write short notes on calibration of Discharge Detectors.  
b) What are the various methods to locate the partial discharges in H.V. equipment? [12]
7. Explain the partial discharge detection in a long cable. [12]
8. Explain the principle of partial discharge detection in Gas-insulated switch gear. [12]

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