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**LDRP INSTITUTE OF TECHNOLOGY & RESEARCH, GANDHINAGAR**  
**B.E. SEMESTER -VI**

**MID SEMESTER EXAM**

**Day: Monday**  
**Date: 2/03/2015**  
**Duration: 12:00 to 1:30**  
**Instructions:**

**Branch: Electrical**  
**Subject Name: High Voltage Engineering**  
**Max. Marks: 30**

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Indicate clearly, the options you attempt along with its respective question number
- 4) Take necessary assumptions where it is required.

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|-------|---|----|
| Q1(a) | Explain Charge simulation method for electric field computation.  | 05 |
| Q1(b) | Define Townsend's ionization coefficients for Primary and Secondary ionization. Derive Townsend's current growth equation for Primary ionization and criterion for breakdown. | 05 |
|       |   |    |
| Q2.   | Write short note on following:  | 05 |
|       | (a) Cascade transformer   | 05 |
|       | (b) Half wave rectifier   |    |

**OR**

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|--------|--|----|
| Q2 (a) | Explain multi-stage Impulse Generator or Marx circuits.                | 05 |
| Q2(b)  | Write a short note on Van de Graff generators.                         | 05 |
|        |  |    |
| Q3(a)  | Write a short note on Paschen's law.                                   | 05 |
| Q3(b)  | State and explain properties of transformer oil as Liquid dielectrics. | 05 |

**OR**

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|-------|---|----|
| Q3(a) | Explain in detail conduction and breakdown in pure Liquids. | 05 |
| Q3(b) | Explain Tripping and control of Impulse Generators.         | 05 |

\*\*\*\*\*ALL THE BEST\*\*\*\*\*

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