PVP 12

Code: EE6T4

III B.Tech - II Semester – Regular Examinations – April 2016

HIGH VOLTAGE ENGINEERING
(ELECTRICAL & ELECTRONICS ENGINEERING)

Duration: 3 hours Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. Why is a Cockcroft-Walton circuit preferred for voltage multiplier circuits? Explain it's working with a schematic diagram. 14 M

2. a) How can you specify an Impulse wave? 7 M

   b) An impulse generator has 8 stages with each condenser rated for 0.16 μF and 125KV. The load capacitor available is 1000 pF. Find the series resistance and Damping resistance needed to produce 1.2/50 μ sec. impulse wave. What is the maximum output voltage of the generator if the charging voltage is 120 KV. 7 M

3. a) Describe the principle of operation of generating voltmeters. 7 M

   b) Discuss the function of CVT. 7 M

4. Explain different methods for the measurement of Impulse Current. 14 M

5. a) Discuss about Paschen's Law briefly. 7 M

   b) What are the preferred properties of a gaseous dielectric for high voltage applications? 7 M

6. What is Thermal break down in solid dielectrics and how is it practically more significant than other mechanisms? 14 M

7. Explain different electrical tests done on isolators, and circuit breakers. 14 M

8. Write short notes on

   a) Expulsion gaps used as protective devices. 7 M

   b) Ground wires for protection of over head lines. 7 M