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BIEE-018

B.TECH. ELECTRICAL ENGINEERING (BTELVI)

00324

Term-End Examination

June, 2013

BIEE-018 : HIGH VOLTAGE ENGINEERING

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **any seven** questions in all.*

1. (a) Explain rectifier circuits for producing HVDC. 5

   (b) What are the special features of high voltage rectifier values ? 5

2. Explain the working of Cockroft Walton circuit with neat diagram 10

3. Explain the working of Vande Graff generator. 10

4. Discuss the different methods of measuring high DC voltages. What are the limitations in each method ? 10

5. Explain the principle and construction of electrostatic voltmeter for measuring very high voltages. 10

6. Explain the principle and construction of Hall - effect generators. **10**

7. Explain the phenomena of electrical conduction in liquids. How does it differ from that in gases ? **10**

8. What is Pastern's Law ? How do you account for the minimum voltage for breakdown under a given 'PXD' condition ? **10**

9. What do you understand by "Intrinsic Strength" of a solid dielectric ? How does breakdown occurs due to electrons in a solid dielectric ? **10**

10. What is impulse test ? Briefly explains the impulse testing of insulators. **10**