BE-sem-VII-Elec-old
HVE

17/12/15

Q.P. Code : 2288

(3 Hours) [Total Marks : 100

Note :- 1. Question .No. 1 is compulsory.
2. Solve any four questions from remaining six questions.
3. Assume suitable data and state it clearly.

Q.1 a) **What is Partial Discharge? Differentiate between internal and external discharges.** (10)

b) **Explain with neat diagram, the different types of rectifier circuits for producing high DC voltages?** (10)

Q.2 a) **What is Paschen''s law ? How does it account for the minimum sparking potential under a given p x d condition?** (10)

b) **With neat diagram, Explain the basic Principle of VAN-DE Graff's generator.** (10)

Q.3 a) **What are the electronegative gases? Why is the breakdown strength higher in these gases compared to that in other gases?** (10)

b) **Derive an expression for ripple voltage of a Multistage Cock Croft-Walton Circuit.** (10)

Q.4 a) **Explain principle of operation of multistage impulse generator using Marx circuit.** (10)

b) **What is cascaded transformer? Explain why cascading is necessary?** (10)

Q5. a) **Explain different types of rectifier circuits for producing high DC voltage with suitable waveforms.** (10)

b) **Write short note on the cable sample preparation before it is subjected to various tests.** (10)

Q.6 a) **Explain how sphere gap measurement can be used for the effect of voltage measurement.** (10)

b) **Explain the treeing and tracking phenomenon in solid insulating materials under electrical stresses.** (10)

Q7. **Write short notes on**

a) **Circuits for producing impulse current waveforms.** (6)
b) **Capacitance potential divider.** (7)
c) **Testing of overhead line insulators.** (7)
