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Total No. of Pages : 01

Total No. of Questions : 08

**M.Tech.(Power System) (2013 Batch) (Sem.-3)**  
**EHVAC AND HVDC TRANSMISSION SYSTEM**

Subject Code : MTPS-301C

Paper ID : [A3219]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- Q1. Describe DC transmission system. What are the problems encountered in EHVAC Transmission.
- Q2. a) What do you mean by voltage gradients of line conductors in EHV AC transmission system?  
b) Discuss the selection of cable in EHVAC transmission system.
- Q3. Explain the following :  
a) Mode Stabilization  
b) Firing angle control
- Q4. What is corona loss? Explain different corona loss formula used in EHVAC lines. An overhead conductor of 1.6 cm radius is 10m above ground. The normal voltage is 133 KV r.m.s to ground (230kv, line to line). The switching surge experienced is 3.5 p.u. Take  $K=0.7$ . Calculate the energy loss per km of line. Assume smooth conductor.
- Q5. Explain Shunt Reactor Compensation of Very Long Line with Intermediate Switching Station and give the Voltage and current expression at Intermediate station.
- Q6. Discuss various faults existing in converter station. Explain protection schemes also.
- Q7. Discuss the limits for radio interference fields and audible Noise in EHV transmission lines. Explain the methods to reduce noise.
- Q8. a) Write an algorithm on DC power flow  
b) Write a note on MTDC