

P4/RT-Ex-07:21

26/5/17

B.E (E) sem III (0)

1106

H.V.D.C. Transmission

Con. 2903-07.

[OLD COURSE] 11.00 To 2.00  
(3 Hours)

ND-695

[Total Marks : 100]

M. B. J. P. R.

- N.B.** (1) Question No.1 is compulsory.  
(2) Attempt any **four** questions from the remaining **six** questions.  
(3) Assume **suitable** data if **required**.  
(4) All main questions carry **equal** marks of **20**; The marks for **sub-questions** are also **equally** distributed. (10)

1. Explain the various types of HVDC transmission systems. Discuss the advantages of using HVDC systems for transmission over HVAC.
2. Explain the three phase bridge type converter in detail complete with waveforms and figures.
3. Explain the characteristics of the controlling the converter. Discuss the power flow when control biasing is not proper.
4. a) Discuss the various protection systems used in the HVDC system.  
b) Write the generation of harmonics in the HVDC systems and its mitigation.
5. Discuss the various types of commutation circuits used in the converter systems.
6. a) Discuss the ac/dc power flow.  
b) Describe the firing control systems in HVDC systems.
7. Describe the various components of HVDC systems.

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