PRN:		Course Code :	ELE2705

Final Year **B. Tech** End Semester Examination Winter 2023

HVDC Transmission

Day and Date: Thursday 07/12/2023 Max Marks: **50**

Time : 2.00 to 4.00 PM Duration: **02** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt any two from the following**			
	a)	Explain the layout of HVDC station and HVDC projects in India.	06	2	1
	b)	Give the comparison between HVDC and EHVAC transmission systems.	06	2	1
	c)	Discuss the hierarchical levels in transmission and distribution and standard rated voltage of HVDC and EHVAC.	06	2	1
Q.2		**Attempt any two from the following**			
	a)	Write a short note on Voltage Dependent Current Order Limiter (VDCOL).	06	2	2
	b)	Analyze the line commutated converter operation in HVDC operation.	06	4	2
	c)	State the main objective of control. Compare Current Source Converter (CSC) and Voltage Source Converter (VSC).	06	3	2
Q.3		**Attempt the following**			
	a)	Write a short note on insulation coordination.	06	2	3
	b)	Explain protection against over current in HVDC convertor station.	07	3	3
		or			
	b)	State and explain the types of converter faults.	07	3	3
Q.4		**Attempt the following**			
	a)	State causes for generation of harmonics. Also explain problems of harmonics in detail.	06	3	4
	b)	Write a short note on characteristic harmonics and non-characteristic harmonics.	07	4	4
		or			
	b)	Explain hybrid active filter for DC filtering in detail.	07	4	4

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