

[M19PS1104]

**I M. Tech I Semester (R19) Regular Examinations  
 HVDC TRANSMISSION  
 Electrical & Electronics Engineering  
 MODEL QUESTION PAPER**

**TIME: 3Hrs.**

**Max. Marks: 75 M**

Answer **ONE Question** from **EACH UNIT**.

All questions carry equal marks.

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			CO	KL	M
		<b>UNIT-I</b>			
1.	a).	Briefly explain the power handling capabilities of HVDC lines.	1	K2	8M
	b).	Mention the advantages of HVDC technical economical reliability aspects.	1	K1	7M
		<b>OR</b>			
2.	a).	Explain briefly abt the static converter configuration.	2	K2	7M
	b).	Explain different types of HVDC links in detail.	1	K2	8M
		<b>UNIT-II</b>			
3.	a).	Write the special features of converter transformers.	2	K1	7M
	b).	Draw the equivalent circuit of converter and explain it.	2	K2	8M
		<b>OR</b>			
4.		With a neat sketch, explain the working of a 12pulse converter circuit.	2	K2	15 M
		<b>UNIT-III</b>			
5.		Mention the reasons for generation of harmonics in HVDC transmission and explain them in detail.	3	K2	15 M
		<b>OR</b>			
6.	a).	Explain briefly abt the Individual phase control.	3	K2	8M
	b).	Explain briefly abt the Constant extinction angle.	3	K2	7M
		<b>UNIT-IV</b>			
7.	a).	Explain the significance of DC power modulation.	3	K2	7M
	b).	What are the advantages of Multi-terminal DC links?	6	K1	8M
		<b>OR</b>			
8.	a).	Give the comparison between series and parallel MTDC systems.	6	K2	8M
	b).	Draw and explain the rectifier characteristics by voltage limiting control method.	3	K2	7M
		<b>UNIT-V</b>			
9.	a).	Discuss abt the over voltages due to disturbances on DC side.	5	K2	8M
	b).	What are the uses of circuit breakers in HVDC systems?	5	K2	7M
		<b>OR</b>			
10.	a).	Explain briefly abt surge arrester and their application?	5	K2	8M
	b).	Discuss abt over current protection.	5	K2	7M