R18

ANURAG Engineering College
(An Autonomous Institution)
IV B.Tech II Semester Advanced Supplementary Examinations, August - 2024
EHV AC TRANSMISSION
(ELECTRICAL AND ELECTRONICS ENGINEERING)

Time: 3 Hours   **Max. Marks: 75**

Section – A (Short Answer type questions)   **(25 Marks)**
Answer All Questions

		Course Outcome	B.T Level	Marks
1.	What is the necessity of EHV AC Transmission?	CO1	L1	2M
2.	Derive the expression for equivalent radius of a bundle conductor.	CO1	L2	3M
3.	Write the charge potential relation of a multi conductor line.	CO2	L1	2M
4.	What are the properties of field of line charges?	CO2	L1	3M
5.	What is Corona?	CO3	L1	2M
6.	What are the methods to reduce corona loss in EHV AC transmission?	CO3	L1	3M
7.	Write short notes on travelling waves in EHV.A.C lines.	CO4	L1	2M
8.	Briefly explain electromagnetic interference of EHV AC transmission.	CO4	L2	3M
9.	Write short notes on Static Reactive compensating system.	CO5	L1	2M
10.	Mention various voltage control methods for EHV AC transmission.	CO5	L2	3M

Section B (Essay Questions)
Answer all questions, each question carries equal marks.   **(5 X 10M = 50M)**

			Course Outcome	B.T Level	Marks
11.	A)	Describe in detail the line parameters for modes of propagation and derive necessary expressions.	CO1	L3	10M
		OR			
	B)	Explain the power handling capability and line losses in EHV lines and discuss the useful conclusions from it.	CO1	L2	10M
12.	A)	Derive the expression for voltage (charge voltage relation) of two conductor line	CO2	L3	10M
		OR			
	B)	Starting from the fundamentals derive the expression for potential relations for multi conductor lines.	CO2	L3	10M
13.	A)	Derive the expression for Corona loss formulae.	CO3	L3	10M
		OR			
	B)	Explain in detail about the measurement of Audible Noise.	CO3	L2	10M
14.	A)	Illustrate about reflection and refraction of travelling waves	CO4	L3	10M
		OR			
	B)	Derive the expressions for induced voltages in the un energized line when only one circuit is energized in the double circuit line.	CO4	L3	10M
15.	A)	Describe the power circle diagram and its use in voltage control.	CO5	L3	10M
		OR			
	B)	Explain the voltage control by using static VAR compensating system.	CO5	L2	10M