

THE KAVERY ENGINEERING COLLEGE

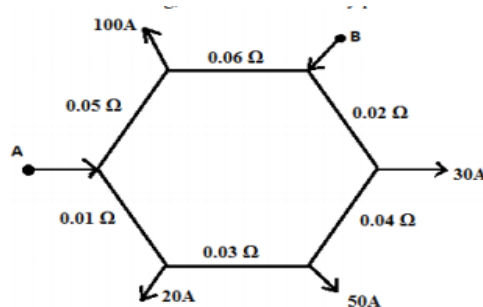
(An Autonomous Institution)

UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, April/May 2026**Fourth Semester****Electrical and Electronics Engineering****UEET24401 - TRANSMISSION AND DISTRIBUTION****Regulations - 2024****Duration : 3 Hrs****Maximum : 100 Marks****PART – A(ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BTL	CO	Marks
1.	Define Skin effect.	L1	1	2
2.	What is meant by transposition in transmission systems?	L2	1	2
3.	Draw the nominal-T representation of a transmission line.	L1	2	2
4.	Define voltage regulation of transmission lines.	L2	2	2
5.	What is meant by sag?	L1	3	2
6.	List the effect of ice and wind in transmission line	L2	3	2
7.	List the types of UG cables	L1	4	2
8.	Give the relation for insulation resistance of a cable.	L2	4	2
9.	What are the advantages of an interconnected system?	L1	5	2
10.	List out the advantages of FACTS controllers.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BTL	CO	Marks
11. a	i State and explain the limitations of kelvin's law.	L2	1	6
	ii Draw and explain the structure of typical electric power system with various voltage levels.	L2	1	10
Or				
b	i Discuss why transmission lines are 3 phase 3 wire system and distribution lines are 3 phase 4 wire system	L2	1	6
	ii Calculate the current supplied at point A and B of the ring main distributor shown below	L2	1	10



12. a	i Summarize the phenomenon of corona and factors which affect corona loss.	L2	2	6
	ii A 50 Hz overhead transmission line consisting of 3 conductors each of diameter 1.24 cm and spaced 2m apart. Assuming transposed line, Calculate the inductance per phase per km for horizontal spacing arrangement between the conductors.	L2	2	10

Or

b	Derive the expressions for regulation and efficiency of a short transmission line with necessary diagrams.	L2	2	16
---	--	----	---	----

13. a	Explain the methods of improving string efficiency of a suspension type insulators	L2	3	16
-------	--	----	---	----

Or

b	Choose any two types of insulators used in transmission line with neat diagram	L2	3	16
---	--	----	---	----

14. a	Explain about capacitance grading of cables.	L2	4	16
-------	--	----	---	----

Or

b	Explain briefly types of UG cables used and compare their advantages and disadvantages	L2	4	16
---	--	----	---	----

15. a	i	Compare HVDC and HVAC transmission systems.	L2	5	8
	ii	Illustrate three different types of DC links.	L2	5	8

Or

b	i	Analyze the types of natural Grounding and resistance grounding	L2	5	8
	ii	State the advantages of interconnected system	L2	5	8
