

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Seventh Semester**Electrical and Electronics Engineering**EE3701 - High Voltage Engineering**Regulations - 2021**Duration : 3 Hrs**Maximum : 100 Marks***PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)**

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	Compare lightning and switching surges.	L2	1	2
2.	Give the causes for over voltages in electrical power system.	L2	1	2
3.	List the types of electrical discharge in gases.	L1	2	2
4.	State the properties of dielectric materials.	L1	2	2
5.	Name the devices used for high voltage measurement.	L1	3	2
6.	Distinguish between electromagnetic and electrostatic machines.	L2	3	2
7.	Specify the International and Indian standards used in high voltage testing.	L1	4	2
8.	Differentiate impulse voltage and withstand voltage.	L2	4	2
9.	Mention the applications of electrostatic coating.	L1	5	2
10.	Define the term electrostatic spinning.	L1	5	2

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

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Discuss the phenomenon of reflection and refraction of travelling waves in detail.	L4	1	16
	Or			
	b Specify the methods available for protection against over voltages and explain them in detail.	L4	1	16
12.	a Describe the phenomenon of gaseous break down in uniform and non uniform fields.	L3	2	16
	Or			
	b Describe the principle of breakdown mechanism occurs in solid dielectrics in detail.	L3	2	16
13.	a Explain the methods for generating high DC and AC voltages and describe their practical applications.	L2	3	16
	Or			
	b Explain the digital techniques used in high voltage measurement in detail.	L2	3	16

14.	a	Discuss the principle of different tests conducted on insulators in detail.	L3	4	16
		Or			
	b	Discuss the different aspects of insulation design and insulation coordination adopted for EHV systems.	L3	4	16
15.	a	Describe the working principle and applications of electrostatic precipitation and separation in industry.	L4	5	16
		Or			
	b	Describe the applications of high voltage engineering in bio medical engineering.	L4	5	16