

### Unit-II

S.No	Questions	BT	CO	PO
<b>Part – A (Short Answer Questions)</b>				
1	Define $\pi$ -mode condition in Magnetron?	L1	CO2	PO1
2	Calculate angular frequency of a magnetron if $B_0 = 2m/e$ ?	L2	CO2	PO2
3	What is mode jumping	L1	CO2	PO1
4	Distinguish between O-type tube and M-type tube	L2	CO2	PO2
5	Write the advantages of Magnetron	L1	CO2	PO1
6	What is raising sun mode? Explain	L1	CO2	PO1
7	Distinguish between Microwave transistor and TED'S	L2	CO2	PO2
8	How IMPATT diode Works	L3	CO2	PO3
9	Write difference between IMPATT and TRAPATT	L1	CO2	PO1
10	Write the application of Gunn Diode	L1	CO2	PO1

### Part – B (Long Answer Questions)

11		Why Magnetron is also called “Extended Interaction tube”? Derive the expression for Hull cut-off magnetic flux density in cylindrical Magnetron.	L5	C02	P03
12	a)	What are $\pi$ -mode oscillations? Explain how oscillations are sustained in the Cavity Magnetron with suitable sketches, assuming that $\pi$ -mode oscillations already exist?	L2	C02	PO1
	b)	Define mode jumping? Explain the techniques to eliminate mode jumping?	L3	C02	PO1
13		With the support of a diagram, explain the operation of Eight Cavity Magnetron.	L2	C02	P02
14	a)	How avalanche effect is utilized to generate microwave signals? Explain the operation of TRAPATT diode.	L3	C02	PO2
	b)	How avalanche effect is utilized to generate microwave signals? Explain Theoperation of IMPATT diode.	L4	C02	P02
15	a)	Explain The RWH theory	L3	C02	PO1
	b)	Explain the Modes of operation of Gunn diode	L4	C02	P01
16	a)	Explain the construction of Gunn diode? Explain the two valley theory?	L4	C02	PO1
	b)	How Gunn diode act as an oscillator Explain it	L4	C02	P02