



## LESSON PLAN

S.No	Date	Topic Planned	Classes Planned	Cum classes	Sign of faculty
		<b>UNIT 1: MICROWAVE TRANSMISSION LINES</b>			
1	20/11/2017	Introduction	1	1	
2	21/11/2017	Microwave spectrum and bands	1	2	
3	23/11/2017	Applications of Microwaves	1	3	
4	24/11/2017	Rectangular Waveguides – TE/TM mode analysis	1	4	
5	27/11/2017	Expressions for Fields	1	5	
6	28/11/2017	Characteristic Equation and Cut-off Frequencies	1	6	
7	29/11/2017	Filter Characteristics, Dominant and Degenerate Modes	1	7	
8	4/12/2017	Sketches of TE and TM mode fields in the cross-section	1	8	
9	5/12/2017	mode Characteristics – Phase and Group Velocities	1	9	
10	6/12/2017	Wavelengths and Impedance relations	1	10	
11	7/12/2017	Relations	1	11	
12	8/12/2017	Power Transmission and Power Losses in Rectangular Guide	1	12	
13	9/12/2017	Impossibility of TEM mode	1	13	
14	11/12/2017	Related Problems	1	14	
15	13/12/2017	ADD ON TOPIC:	1	15	
		<b>UNIT 2 :CIRCULAR WAVEGUIDES</b>			
16	14/12/2017	Introduction, Nature of Fields	1	16	
17	15/12/2017	Dominant and Degenerate Modes	1	17	
18	16/12/2017	Microstrip Lines- Introduction	1	18	
19	18/12/2017	Zo Relations, Effective Dielectric Constant	1	19	
20	19/12/2017	Losses, Q factor	1	20	
21	20/12/2017	Cavity Resonators- Introduction	1	21	
22	21/12/2017	Rectangular and Cylindrical Cavities	1	22	
23	22/12/2017	Dominant Modes and Resonant Frequencies	1	23	
24	20/12/2017	Excitation techniques- waveguides and cavities	1	24	
25	21/12/2017	Related problems	1	25	
26	22/12/2017	ADD ON TOPIC:	1	26	
		<b>UNIT- III WAVEGUIDE COMPONENTS AND APPLICATIONS</b>			
27	26/12/2017	Mechanisms – Probe, Loop, Aperture types. Waveguide	1	27	



		Discontinuities			
28	27/12/2017	Waveguide irises, Tuning Screws and Posts	1	28	
29	28/12/2017	Matched Loads. Waveguide irises	1	29	
30	29/12/2017	Attenuators – Resistive Card, Rotary Vane types	1	30	
31	4/1/2018	Waveguide Phase Shifters	1	31	
32	5/1/2018	Dielectric, Rotary Vane types. Scattering Matrix	1	32	
33	6/1/2018	Formulation and Properties. S-Matrix	1	33	
34	7/1/2018	2 port Junction, Eplane and H-plane Tees	1	34	
35	8/1/2018	2Hole, Bethe Hole types, Ferrite Components– Faraday Rotation, S-Matrix	1	35	
36	9/1/2018	Calculations for Gyrator, Isolator, Circulator, Related Problems	1	36	
37	10/1/2018	Hybrid Ring; Directional Couplers	1	37	
38	11/1/2018	ADD ON TOPIC:	1	38	
		MID- I EXAM 15/1/2018 TO 20/1/2018			
		<b>UNIT 4 : MICROWAVE TUBES</b>			
39	22/01/2018	Limitations and Losses of conventional tubes	1	39	
40	23/01/2018	Microwave tubes – O type and M type classifications. O-type tubes : 2 Cavity	1	40	
41	24/01/2018	Klystrons – Structure, Reentrant Cavities, Velocity Modulation Process	1	41	
42	25/01/2018	Applegate Diagram, Bunching Process and Small Signal Theory	1	42	
43	27/01/2018	Expressions for o/p Power and Efficiency. Reflex Klystrons – Structure	1	43	
44	29/01/2018	Applegate Diagram and Principle of working, Mathematical Theory	1	44	
45	30/01/2018	Bunching, Power Output, Efficiency, Electronic Admittance; Oscillating	1	45	
46	1/2/2018	ADD ON TOPIC	1	46	
		<b>UNIT 5: HELIX TWTS</b>			
47	3/2/2018	Significance, Types and Characteristics of Slow Wave	1	47	
48	5/2/2018	Structure of TWT	1	48	
49	6/2/2018	Suppression of Oscillations	1	49	
50	7/2/2018	Nature of the four Propagation Constants		50	
51	10/2/2018	<b>M-type Tubes</b>	1	51	
52	12/2/2018	Cross-field effects, Magnetrons	1	52	
53	13/2/2018	Cylindrical Travelling Wave	1	53	
54	14/2/2018	Magnetron – Hull Cut-off and Hartree Conditions, Modes of Resonance	1	54	



55	13/2/2018	PI-Mode Operation	1	55	
56	15/2/2018	Separation of PI-Mode	1	56	
57	16/2/2018	o/p characteristics	1	57	
58	17/2/2018	ADD ON TOPIC	1	58	
		<b>UNIT-VI MICROWAVE SOLID STATE DEVICES</b>			
59	19/2/2018	Introduction, Classification	1	59	
60	20/2/2018	Applications. TEDs – Introduction	1	60	
61	21/2/2018	, Gunn Diode – Principle	1	61	
62	20/2/2018	RWH Theory	1	62	
63	21/2/2018	Characteristics, Basic Modes of Operation	1	63	
64	23/2/2018	Oscillation Modes. Avalanche	1	64	
65	25/2/2018	Transit Time Devices – Introduction	1	65	
66	26/2/2018	IMPATT and TRAPATT Diodes	1	66	
67	27/2/2018	Principle of Operation and Characteristics	1	67	
68	1/3/2018	Description of Microwave Bench	1	68	
69	3/3/2018	Different Blocks and their Features	1	69	
70	6/3/2018	Precautions; Microwave Power	1	70	
71	7/3/2018	Graphical approach	1	71	
72	8/3/2018	Measurement of Attenuation	1	72	
73	9/3/2018	VSWR, Cavity Q	1	73	
74	11/3/2018	ADD ON TOPIC	1	74	

REVISION :

MID- II EXAMS 19/3/2018 TO 24/3/2018

signature of faculty

signature of HOD