

Teaching Diary
2019-20

Power Semiconductor Drives

Sl. No.	DATE	PERIOD	TOPICS TAUGHT	REMARKS
01	15/7/19	III	Basics of Radar Introduction	
02	16/7/19	IV	Maximum unambiguous range.	
03	17/7/19	I	Simple form of radar equation	
04	22/7/19	III	Radar block diagram & operation	
05	23/7/19	IV	Radar frequencies & Applications	
06	24/7/19	I	Prediction of range performance	
07	30/7/19	IV	Minimum detectable signal	
08	31/7/19	I	Receiver noise.	
09	5/8/19	III	modified radar range equation	
10	6/8/19	IV	Radar equation : SNR	
11	7/8/19	I	Envelope detector false alarm	
			time & probability	
12	13/8/19	IV	Integration of Radar pulses	
13	14/8/19	I	Radar Cross section Targets.	
14	19/8/19	III	Transmitter power	
15	20/8/19	IV	PRF & Range ambiguities.	
16	21/8/19	I	System losses - qualitative	
17	26/8/19	IV	CW & frequency modulated radar	
			Introduction : Doppler effect	
18	27/8/19	IV	CW-radar - Block Diagram.	
19	28/8/19	I	Isolation b/w transmitter & Receiver	
20	3/9/19	IV	Non Zero IF receiver	
21	4/9/19	I	Receiver bandwidth requirements	
22	9/9/19	III	Applications of CW-radar	
23	11/9/19	I	Fm-cw radar Introduction	
24	16/9/19	III	Range & Doppler measurement.	
25	17/9/19	IV	Block Diagram & Characteristics	
26	18/9/19	I	Fm-cw altimeter	
27	23/9/19	III	MTI & Pulse doppler radar	
			Introduction	
28	24/9/19	IV	Principle of MTI radar	
29	25/9/19	I	MTI radar - power amplifier Tx	
30	30/9/19	III	MTI radar - power oscillator Tx	

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Principal



Sl. No.	DATE	PERIOD	TOPICS TAUGHT	REMARKS
31.	1/10/19	<u>I</u>	Delay line cancellers.	
32	2/10/19	<u>II</u>	filter characteristics, Blind speeds	
33	22/10/19	<u>IV</u>	Double Cancellation	
34	23/10/19	<u>I</u>	Staggered PRF's.	
35	24/10/19	<u>II</u>	Range gated doppler filters	
36	29/10/19	<u>IV</u>	MTI radar Parameters.	
37	30/10/19	<u>I</u>	Limitations to MTI performance	
38	30/10/19	<u>I</u>	MTI Versus pulse Doppler radar.	
39	20/10/19	<u>I</u>	Tracking radar introduction	
40	4/11/19	<u>II</u>	Tracking with radar.	
41	4/11/19	<u>III</u>	Sequential lobing.	
42	4/11/19	<u>III</u>	Conical scan	
43	5/11/19	<u>IV</u>	mono pulse tracking radar.	
			Amplitude comparison mono pulse	
44	5/11/19	<u>IV</u>	Phase comparison mono pulse.	
45	5/11/19	<u>IV</u>	Tracking in range.	
46	5/11/19	<u>IV</u>	Acquisition + scanning pattern	
47	6/11/19	<u>I</u>	Comparison of Trackers	
48	6/11/19	<u>I</u>	Detection of radar signals in noise	
			Introduction	
49	6/11/19	<u>I</u>	matched filter Receiver.	
50.	6/11/19	<u>I</u>	Response characteristics & Derivation	
51	11/11/19	<u>III</u>	Correlation function & cross	
			correlation receiver	
52.	11/11/19	<u>III</u>	Efficiency of Non-white Noise.	
			matched filters.	
53.	11/11/19	<u>III</u>	matched filter Nonwhite Noise.	
54.	11/11/19	<u>III</u>	Radar Receivers Noise figure	
			Noise temperature.	
55.	13/11/19	<u>I</u>	Displays Type 1.	
56.	13/11/19	<u>I</u>	Duplexers Branch type &	
			Balanced type	
57.	13/11/19	<u>I</u>	Circulators as a duplexers	

Dai
Lecturer

S.O.D.

Principal



