



**B. P. Poddar Institute of Management & Technology**  
**Department of Electronics & Communication Engineering**  
**Academic Year: 2017-18 Semester: Even**  
**Laboratory Name Maxwell Laboratory Room No.: B602**  
**2<sup>nd</sup> Year ECE 2<sup>nd</sup> semester**  
**Course Name: EM Theory & Transmission Lines (EC 491)**  
**List of Experiments to be conducted**



Expt. No.	Name of Experiment	CO	PO	PSO
1	Familiarization with various types of RF and microwave components, measuring instruments and various types of antennas	1	1,7,8,9,10,12	1,2
2	Plotting of standing wave pattern and measurement of voltage standing wave ratio (VSWR) in a microwave test bench for various types of load	2	1,2,3,5,6,7,8,9,10,12	1,2
3	Determination of reflection co-efficient and voltage standing wave ratio (VSWR) of a coaxial line for various load conditions using time domain and frequency domain techniques.	3	1,2,3,5,6,7,8,9,10,12	1,2
4	Determination of Input impedance of a terminated waveguide using shift in minima technique	2	1,2,3,5,6,7,8,9,10,12	1,2
5	Study of Smith chart on Matlab platform	4	1,2,3,5,6,7,8,9,10,12	1,2
6	Study of radiation pattern of a dipole antenna	5	1,2,3,5,6,7,8,9,10,12	1,2
7	Study of radiation pattern of a folded dipole antenna	5	1,2,3,5,6,7,8,9,10,12	1,2
8	Study of radiation pattern of a 3-element Yagi-Uda antenna	5	1,2,3,5,6,7,8,9,10,12	1,2
9	Study of radiation pattern of a pyramidal horn antenna	6	1,2,3,5,6,7,8,9,10,12	1,2
10	Measurement of gain and bandwidth of a pyramidal horn antenna	6	1,2,3,5,6,7,8,9,10,12	1,2
11	<b>Additional Experiments</b>			
11.a	Measurement of Coupling, Isolation, Directivity of Directional Coupler.	NA	1,2,3,5, 6,7,,8,9,10,12	1,2
11.b	Determination of attenuation constant of a coaxial line for various load condition using frequency domain technique.	NA	1,2,3,5, 6,7,,8,9,10,12	1,2