



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

Electronics and Communication Engineering

Laboratory Equipment – Antennas and Microwave Engineering Laboratory

This laboratory provides all hardware and software required to design and simulation of antennas and high frequency applications using Ansys HFSS software. The configuration of hardware and software used are detailed as follows:

- 1. Server Configuration:** Dell PowerEdge R430, Form Factor: 2U Rack Server, Processor Series: Intel® E5-2623 v3 Product Family, Processor Sockets: 2, Max Memory Capacity: 4GB DDR4, Max Storage Capacity: 2x2 TB HDD, Supports Intel C610 series chipset, Supported Power Supplies: 495W, 750W, 1100W.
- 2. Operating System:** Microsoft – Microsoft – Windows 11 & amp.
- 3. Connectivity:** 1000Mbps internet and LAN connected to campus server.
- 4. Laboratory Equipment:**

S. No	Item	Make	Quantity	Cost per Unit (Rs.)	Total Cost (Rs.)
1	Klystron based microwave bench setup	Vidyuthyantra	03	62,210	1,86,630
2	Gun diode based microwave bench setup	Vidyuthyantra	01	54,455	54,455
3	VSWR meter	Vidyuthyantra	06	62,210	3,73,260
4	Slotted line	Vidyuthyantra	02	1,750	3,500
5	Magic tee	Vidyuthyantra	02	2,225	4,450
6	Circulator	Vidyuthyantra	02	5,072	1,01,44
7	Directional coupler	Vidyuthyantra	02	5,040	10,080
8	Variable attenuator	Vidyuthyantra	02	4,245	8,490
9	Matched terminator	Vidyuthyantra	02	2,125	4,250
10	Frequency meter	Vidyuthyantra	02	2,225	4,450
11	Klystron power supply	Vidyuthyantra	02	17,770	35,540
12	Klystron tube	Vidyuthyantra	02	5,040	10,080
13	Detector mount	Vidyuthyantra	02	3,390	6,780
14	Wave guide stands	Vidyuthyantra	06	440	2,640
15	Isolator	Vidyuthyantra	04	5,075	20,300
16	Movable short	Vidyuthyantra	01	2,125	2,125
17	SS tuner	Vidyuthyantra	01	2,760	2,760

19	Klystron based microwave bench setup with waveguides	Physitech	02	47,253	94,506
20	Gunndiode based microwave bench setup with waveguides	Physitech	01	77,655	77,655
21	Cathode ray oscilloscope (0-30MHz)	Physitech	09	14,500	1,30,500
22	Digital multimeter	Physitech	05	1,487	7,435
23	Desktop Computer Systems: Vostro 3470 / 3268 desktop Intel core-i3- 4150 processor / 4GB DDR4-500 GB SATA HDD / keyboard and mouse / NO ODD / 22" Monitor	DELL	19	21,000	3,99,000
24	Application software: Ansys Academic HFSS	Ansys	25 users	5,00,000	5,00,000
Total Cost (Rs.)					19,49,030
In Words –Rupees nineteen lakh forty nine thousand and thirty Only					

Date:

HOD