

K.D.K. COLLEGE OF ENGINEERING
Department of Electronics Engineering

B. E. Sixth Semester Electronics Engineering
Subject: Microwave Engineering

Subject Code : BEENE601P
Duration : 2 Hr.

College Assessment : 25 Marks
University Assessment : 25 Marks

Minimum TEN experiments to be performed

List of Experiments:

1. To Study the characteristics of Klystron Tube and to determine its electronic tuning range.
2. To determine the frequency and wavelength in a rectangular waveguide working on TE₁₀ mode.
3. To determine the Standing Wave-Ratio and reflection coefficient.
4. To study and verify the V-I characteristics of Gunn Diode.
5. To study and verify the following characteristics of Gunn Diode.
 - (a) Output power and frequency as a function of voltage.
 - (b) Square wave modulation through PIN diode.
6. To study the function of Magic Tee by measuring the following parameters.
 - (a) Measurement of VSWR at different ports and
 - (b) Measurement of isolation and coupling coefficient.
7. To study the function of Isolator / Circulator by measuring the following parameters.
 - (a) Input VSWR measurement of Isolator / Circulator.
 - (b) Measurement of Insertion loss and Isolation coefficient.
8. Study the function of Attenuator (Fixed and Variable type) by measuring the following parameters.
 - (a) Input VSWR measurement.
 - (b) Measurement of Insertion loss and Attenuation factor.
10. To study the function of Multi Hole Directional Coupler by measuring the following parameters.
 - (a) To measure main line and auxiliary line VSWR.
 - (b) To measure the coupling factor and directivity.
11. To study of a network analyzer and measurements using it.
12. To study and verify the transmission characteristics of Microwave Tees (E, H, E-H planes)
13. To study and verify the transmission characteristics of Directional Coupler, study of Coupling factor, Insertion loss and Directivity.
14. To plot the radiation pattern of Horn Antenna and calculate its Antenna Gain and Beam width.
15. To study of Transmission line Characteristics etc. (Based on Simulation)

Signature of the Lab Incharge

Signature of the Subject Teacher