**CVR College of Engineering**

**Electronics and Communication Engineering**

**Microwave Engineering**

**Assignment-I (2018-19)**

Q1. Write dissimilarities between waveguides and two wire transmission line.

Q2. Define frequency band and application of microwave.

Q3. Define cut-off frequency, wave impedance, phase velocity and group velocity of rectangular waveguide .

Q4. Write significance and properties of S-parameter.

Q5. Define dominant and degenerate mode.

Q6. Explain coupling probes.

Q7. Starting from Maxwell’s equation’s, derive the field component of TM/TE mode.

Q8. Sketch dominant mode in rectangular waveguide.

Q9. Derive the S-Matrix of E-plane Tee / H-plane Tee / E-H plane Tee junction with diagram and its application.

Q9. Write the classification of attenuators and explain any one.

Q10. Explain the operation of directional coupler and derive its S-matrix.

Q11. Define cavity resonator and drive expression for resonant cavity.