S.B. Roll No…….

MICROWAVE RADAR ENGINEERING
6th Exam/ECE/3612/Jan'2022
(For 2018 Batch onwards)

Duration: 1.15Hrs. **M.Marks:25**

SECTION-A

Q1. Attempt any three questions. **3x5=15**

i. Write down the applications of microwaves.
ii. Explain the disadvantages of conventional tubes at high frequencies.
iii. What is a reflex klystron oscillator? Explain its working.
iv. Explain the operating principle of IMPATT diode.
v. Explain how a waveguide is different from conventional transmission lines.
vi. What is a directional coupler? Explain its use in microwave circuits.
vii. Explain how tropospheric duct formation is used in microwave communication?

SECTION-B

Q2. Attempt any one question. **1x10=10**

a. What is Travelling Wave Tube.? Explain its construction and operating principle? How is it better than Klystron amplifier?
b. What is a magic tee? Explain its construction and operating principle. Write at least one application of magic tee.
c. Draw and explain the block diagram of 'Tropospheric Communication Link'?
d. What is Moving Target Indication (MTI) radar? Explain its working with the help of a diagram.