Dr. Salman

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2022

B.Tech. V Semester (ECE-Backlog)

COURSE CODE: 18B1WEC532

COURSE NAME: Microwave components and Devices MAX. MARKS: 25

COURSE CREDITS: 04 MAX. TIME: 1hour 30 min

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. Derive the Telegrapher's equations that describe the relationship between voltage and current on a distributed transmission line model. [5]

Q2. What do mean by a quarter waver transformer? What is the significance of it? Write the expressions for input impedance of an open circuited and short circuited transmission line. [4]

Q3. Write a short note on TE, TM and TEM modes in a rectangular waveguide. [4]

Q4. Write a short note along with neat diagrams of E-plane and H-plane junctions.[4]

Q5. Write a short note on important applications of Smith chart along with reasonable diagrams of resistance circles and reactance circles. [4]

Q6. What do you mean by impedance matching? Explain the significance of impedance matching with regards to VSWR and reflection coefficient. [4]