No. of Printed Pages : 4 181061/171061
Roll No. .....

6th Sem./Eltx
Subject:- Microwave & Radar Engg

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 What is the frequency range of microwave:
- a) 1MHz to 100MHz
- b) 1GHz to 1000GHz
- c) Up to 900MHz
- d) Greater than 200KHZ

Q.2 Which of following exhibits negative resistance.
- a) Gunn diode b) Impatt diode
- c) Reflex klystron d) TWT

Q.3 A waveguide can be considered be equivalent to a .
- a) High pass filter b) Low pass filter
- c) Band pass filter d) Band reject filter

Q.4 Dominant mode off rectangular Waveguide is.
- a) Te 10 b) Te11
- c) Te 01 d) None

Q.5 Reflex klystron consists of .
- a) Single cavity b) Two cavity
- c) multi cavity d) None

Q.6 Which of following are used to change the direction of polarization of a wave.
- a) Corner b) Bends
- c) Tapers d) Twist

Q.7 Magic tee is nothing but.
- a) A modification of E-plane tee
- b) A modification of H-Plane tee
- c) Two E-Plane tees connected in parallel
- d) A combination of E-plane and H-Plane tee

Q.8 Directivity of an antenna is .
- a) Directive gain expressed in decibels
- b) Maximum value of directive gain
- c) Directly proportional to its beam width
- d) Same as directive gain

Q.9 MTI radar stand for
- a) Moving target indicator
- b) moving training instrument
- c) Machine training indicator
- d) None

Q.10 A PPI displays.
- a) Range versus angle
- b) Amplitude versus frequency
- c) Range amplitude versus frequency
- d) None

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Define microwave.

Q.12 Name any two sources of microwave.

Q.13 Define waveguide.

Q.14 Expand TWT.

Q.15 Define group velocity

Q.16 Define TEM mode.

Q.17 What is use of directional coupler?

Q.18 Define circulator.

Q.19 Radar stands for_____.

Q.20 What is principle of MTI radar?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Draw block diagram off microwave communication link.

Q.22 Define waveguide explain different type of waveguide.

Q.23 List advantages of microwave .

Q.24 Write any two application of magnetron. why magnetron is called a cross field device?

Q.25 Write a note on TWT.

Q.26 How propagation of wave is done in a waveguide?

Q.27 Why TEM mode is not possible in a Waveguides?

Q.28 Explain construction and working of circulator.

Q.29 What do you mean by directional coupler? how it works?

Q.30 Define ground wave propagation .

Q.31 Write constructional feature of magic tee.

Q.32 Write a note on dish antenna.

Q.33 Draw block diagram of MTI radar.

Q.34 Explain concept of unambiguous.

Q.35 Write different applications of radar.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Expalin construction and working of reflex klystron with its application.

Q.37 Write a note on -

a) Doppler effect

b) Troposcatter communication

Q.38 Draw and Explain block diagram of CW radar. What are its merits and demerits?