Q.27 What are applications of Radar. (CO6)

Q.28 Draw a labelled diagram of two cavity klystron Amplifier. (CO4)

Q.29 Explain the limitations of Vacuum Tubes at high frequencies. (CO4)

Q.30 Write a brief note on Dish Antenna. (CO5)

Q.31 Explain the different properties of Troposphere. (CO5)

Q.32 Explain VSAT and its features. (CO7)

Q.33 Write a short note on Basic Pulse Radar. (CO6)

Q.34 Explain different applications of HORN Antenna. (CO5)

Q.35 Explain Troposcatter communication in brief (CO5)

SECTION-D

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

Q.36 Draw labelled diagram of Travelling wave tube Amplifier. Explain its working in elaborated manner. (CO1)

Q.37 Draw block diagram of FMCW Radar. Explain its working in detail. (CO2)

Q.38 Explain working Principal of Microwave Communication Link with the help of suitable diagram (CO6)

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5th Sem / Eltx

Subject:- Microwave and Radar Engineering

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Frequency Range of Ka band is (CO1)

a) 12GHz-18 GHz b) 8GHz-12GHz

c) 26GHz-40 GHz d) 2GHz-4 GHz

Q.2 Output of_____ TEE is in Phase. (CO3)

a) E Plane b) H Plane

c) Both d) None

Q.3 Klystron operates on the principal of_____ (CO4)

a) Velocity Modulation

b) Amplitude Modulation

c) Phase Modulation

d) Frequency Modulation

Q.4 In which of the following bands the horn antenna operates? (CO5)

a) HF and VHF b) UHF and LF

c) UHF and SHF d) LF and VHF

Q.5 Hollow Rectangular Waveguide acts as _____(CO2)

a) Low Pass Filter b) High Pass Filter

c) Band Pass Filter d) Band Reject Filter

Q.6 D layer is at height of_____ (CO5)

a) 50Km-100 Km b) 100Km-140Km

c) 140Km-250Km d) 20Km-100Km

Q.7 RADAR Stands for_____ (CO6)

a) Radio Detection and Ranging

b) Radio direction and Reflection

c) Radio wave dispatching and receiving

d) Random Detection and Re-Radiator

Q.8 VSAT operates mainly in the? (CO7)

a) Ku band and C band frequencies

b) C Band only

c) Ku Band only

d) Ku, C, F bands only

Q.9 Image shows (CO3)

a) Slotted Section b) Klystron Mount

c) Directional Coupler d) Termination

Q.10 Relation ship between Wavelength, frequency and Speed of light is (CO2)

a) l = f* c b) c = l /f

c) f= l *c d) c= l *f

SECTION-B

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

Q.11 For Measurement of speed of targets _____ RADAR is used.(CW/MTI) (CO6)

Q.12 VSAT stands for_____ (CO7)

Q.13 What is Microwave? (CO1)

Q.14 Define Waveguide. (CO2)

Q.15 What is circulator. (CO3)

Q.16 IMPATT Stands for_____ (CO4)

Q.17 Define Unambiguous Range. (CO6)

Q.18 Draw Structure of Horn Antenna. (CO5)

Q.19 Define Duct Formation. (CO5)

Q.20 Attenuator is used to_____ (CO3)

SECTION-C

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

Q.21 Enlist the applications of Microwave Range. (CO1)

Q.22 Explain the working of isolator. (CO3)

Q.23 Draw block diagram of MTI Radar. (CO6)

Q.24 Explain different types of waveguide TEE along with its features. (CO3)

Q.25 Define cutoff wavelength. Explain its relationship with free space wavelength. (CO2)

Q.26 Why TEM mode does not exist in waveguide. (CO2)