

No. of Printed Pages : 4

Roll No.

121053

5th Sem. / Eletx

Subject : Microwave and Radar Engineering

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note:Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1
- a) TDMA.
 - b) Radar Display.
 - c) FMCW.
 - d) Doppler Frequency shift.
 - e) Height of E layer.
 - f) FDMA.
 - g) Duct height.
 - h) Dipole end fire feed.

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- i) Directive gain.
- j) Magnetron.
- k) Load Inductance Effect.
- l) Slotted Section.
- m) Coupling Probe.
- n) Radar Range equation is_____.
- o) Magic T.
- p) Variable attenuator.
- q) Phase Velocity.
- r) Dominant Mode.

SECTION-B

Note:Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) What are the advantages of Microwave?
 - ii) What are the features of unguided wave?

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- iii) Explain propagation constant of a rectangular waveguide.
- iv) What are the features of H plane Tee?
- v) Explain how matched termination is achieved?
- vi) What are applications of two cavity klystron?
- vii) What are the features of multi cavity magnetron?
- viii) Describe HORN Antenna in brief.
- ix) What are the limitation of DISH Antenna?
- x) Describe the properties of Isoposphere.
- xi) List the Military application of RADAR.
- xii) Give advantage of FMCW Radar.
- xiii) Explain principle of basic pulse radar.
- xiv) Write short note on VSAT.
- xv) What are various multiple access techniques used in India.

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SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Explain different modes of Waveguide in detail.
- Q.4 Explain the construction and working of Magic Tee.
- Q.5 Explain the working of Reflex Klystron. Draw the neat diagram of the circuit.
- Q.6 Explain the working of microwave communication link with the help of block diagram.
- Q.7 Draw the neat diagram of CW Doppler radar and Explain its working operation in detail.

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