Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech (Electronics Engineering) (E1 2012 Onwards) (Sem.–6)

MICROWAVE AND RADAR ENGINEERING

Subject Code : BTEEE-603B

M.Code : 72843

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Answer briefly :

a) What do you understand by Doppler shift?

b) Write short note on SWR.

c) Explain vertical scanning technique.

d) Define calorimeter with example.

e) Write a short note on PIN diode.

f) Define attenuators.

g) Explain collapsing loss.

h) How can we eradicate blind speed?

i) Define cavity resonator.

j) State advantages of phased array radars.

SECTION-B

Q2. With a neat sketch, explain the TRAPATT diode and draw its characteristics.

Q3. Explain construction and working of precision rotary type phase shifter, with neat diagram.

Q4. Explain the principle and working of MT1 radar with the help of block diagram.

Q5. With a neat block diagram, explain the working principle of CW radar.

Q6. What are S- parameters? Explain the S- parameters for two port network.

SECTION-C

Q7. a) Explain in detail about the applications of radars.

b) With a neat diagram, explain the operation of microwave attenuator.

Q8. Discuss in detail about the Doppler tracking systems.

Q9. Derive the radar range equation and explain the factors influencing the maximum range of RADAR.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.