

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Electronics & Electrical Engg.) (Sem.-6)**MICROWAVE AND RADAR ENGINEERING****Subject Code : BTEEE-603B****M.Code : 71138****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. Write briefly :**

- a) What is the limitation of conventional tubes?
- b) What is magnetron?
- c) What is avalanche time?
- d) What is the function of phase shifter?
- e) What is the difference between frequency and wavelength?
- f) Where is radar used?
- g) What is blind speed?
- h) What is doppler effect? What is the application of doppler effect?
- i) What do you understand from angle tracking?
- j) What is the difference between frequency domain and time domain?

SECTION-B

2. What is Klystron amplifier? Explain the operation and properties of Klystron amplifier.
3. What are the differences between BJT and FET? How do they work? Explain.
4. How power measurements done using calorimeters and bolometers?
5. What is CW radar? What is the principle of working of CW radar? What are the limitations of CW radar?
6. What are ferrite devices? Explain isolator, circulator and gyrator.

SECTION-C

7. What are the scanning and tracking techniques? Discuss various types of scanning and tracking systems with neat diagrams. What is the difference between angle tracking and range tracking systems?
8. With the help of block diagram explain the operation of radar? Also derive radar equation? What are the applications of radar?
9. Explain the following :
 - a) Attenuator
 - b) Phase shifter
 - c) S.S tuner
 - d) Microwave

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.