**Code No: 16EC4202 SET- 1**

**GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY (Autonomous)**

**Cheeryal (V), Keesara (M), Medchal Dist. 501301**

**IVB.Tech ECE II Semester – I Mid Examinations, JANUARY – 2020**

**RADAR SYSTEMS**

**Time: 20 Mins Max. Marks: 10**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| CO1 | CO2 | CO3 |
| 3.5 M | 3M | 3.5 M |

**I. Choose the correct alternative: (10\*1/2= 5 M)**

**1.** The radar in which both transmission and reception is done using the same antenna are called [ ]

 A) Monostatic radar B) Bistatic Radar C) Monopole radar D) Dipole radar

**2.** The term radar cross section defines the **[ ]**

A) Scattering ability of the target

B) Power radiating ability of the radar
C) Amount of energy scattered by unwanted objects

D) Cross section of radar area through which energy is emitted

**3.**  A \_\_\_\_\_\_\_\_ determines the target range by measuring the round trip time of a pulsed microwave signal.  **[ ]**

A) Pulse Radar B) Doppler Radar `C) Cross Section RadarD) None of the mentioned

**4.** Which of the following is the biggest disadvantage of the CW Doppler radar **[ ]**

A) it does not give the target velocity B) it does not give the targetposition

C) a transponder is required at the target D) it does not give the target range.

**5.** The remedy for the problem of “blind speed “ is **[ ]**

A) Variation of PRF B) Use of monopulse C) Use of MTI
D) Change in Doppler frequency

**6.** In MTI radar, COHO operates at \_\_\_\_\_\_\_\_ frequency **[ ]**

A) Pulse repetition B) Supply frequency C) Intermediate D) None of these

**7.**Pulse Repetition Time of Radar is \_\_\_\_\_\_when the Pulse Repetition Frequency is 1500 Hz

**[ ]**

 A) 5000 μsec B) 666 μsec C) 1200 μsec D) 60 μsec

**8.** The extent of a 1μs Radar pulse in the free space when it is transmitted is \_\_\_ meters [ ]

A)3 B)30 C) 300 D) None of these

**9.** Blind speed causes target to appear **\_\_\_\_\_\_\_\_\_\_ [ ]**

A). moving uniformly B) moving irregularly C) stationary D)Invisible

**10.** STALO stands for **[ ]**

 A) Standard local oscillator B) Stable L-band output

C) Stabilized local oscillator D) Saturated and linear oscillator

**P. T. O.**

**II. Fill in the Blanks: (10\*1/2= 5 M)**

**11.** Echoes that arrive after the transmission of the next pulse are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ echoes

**12.** The weakestsignal the receiver can detect is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_detectable signal.

**13.**MTI Stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**14.**In the frequency-modulated CW radar, the transmitter frequency is changed as a function of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**15.** The range beyond which the targets appear as secondtime- around echoes is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**16.** If the target detection threshold were set too low, noise might exceed it and be mistaken for a target. This is called \_\_\_\_\_\_\_\_\_\_\_\_\_

**17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the radar system is the number of pulses that are transmitted per second.

**18.** PRF stands for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**19.**It is well known in the fields of optics and acoustics that if either the source of oscillation or the

Observer of the oscillation is in motion; an apparent shift in frequency will result. This is called

 \_\_*\_\_\_\_\_\_\_\_\_\_\_*

**20.** The relation between the doppler frequency shift fd, radial velocity vr and transmitted frequency fo is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Code No: 16EC4202 SET- 2**

**GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY (Autonomous)**

**Cheeryal (V), Keesara (M), Medchal Dist. 501301**

**IVB.Tech ECE II Semester – I Mid Examinations, JANUARY – 2020**

**RADAR SYSTEMS**

**Time: 20 Mins Max. Marks: 10**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| CO1 | CO2 | CO3 |
| 3.5 M | 3M | 3.5 M |

**I. Choose the correct alternative: (10\*1/2= 5 M)**

**1.** The extent of a 1μs Radar pulse in the free space when it is transmitted is \_\_\_ meters [ ]

A)3 B)30 C) 300 D) None of these

**2.** Blind speed causes target to appear **\_\_\_\_\_\_\_\_\_\_ [ ]**

A)moving uniformly B) moving irregularly C) stationary D) intermittently

**3.** STALO stands for **[ ]**

 A) Standard local oscillator B) Stable L-band output

C) Stabilized local oscillator D) Saturated and linear oscillator

**4.** The remedy for the problem of “blind speed “ is **[ ]**

A) Variation of PRF B) Use of monopulse C) Use of MTI
D) Change in Doppler frequency

**5.** In MTI radar, COHO operates at \_\_\_\_\_\_\_\_ frequency **[ ]**

A) Pulse repetition B) Supply frequency C) Intermediate D) None of these

**6.**Pulse Repetition Time of a Radar is \_\_\_\_\_\_when the Pulse Repetition Frequency is 1500 Hz

**[ ]**

A) 5000 μsec B) 666 μsec C) 1200 μsec D) 60 μsec

**7.** The radar in which both transmission and reception is done using the same antenna are called [ ]

 A) Monostatic radar B) Bistatic Radar C) Monopole radar D) Dipole radar

**8.** The term radar cross section defines the **[ ]**

A) Scattering ability of the target

B) Power radiating ability of the radar
C) Amount of energy scattered by unwanted objects

D) Cross section of radar area through which energy is emitted

**9.**  A \_\_\_\_\_\_\_\_ determines the target range by measuring the round trip time of a pulsed microwave signal.  **[ ]**

A) Pulse Radar B) Doppler Radar `C) Cross Section RadarD) None of the mentioned

**10.** Which of the following is the biggest disadvantage of the CW Doppler radar **[ ]**

A) it does not give the target velocity B) it does not give the targetposition

C) a transponder is required at the target D) it does not give the target range.

**P. T. O.**

**II. Fill in the Blanks: (10\*1/2= 5 M)**

**11.** PRF stands for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**12.** It is well known in the fields of optics and acoustics that if either the source of oscillation or the

 observer of the oscillation is in motion, an apparent shift in frequency will result. This is called

 \_\_*\_\_\_\_\_\_\_\_\_\_\_*

**13.** The relation between the doppler frequency shift fd, radial velocity vr and transmitted frequency fo is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**14.** The range beyond which the targets appear as secondtime-around echoes is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**15.** If the target detection threshold were set too low, noise might exceed it and be mistaken for a target. This is called \_\_\_\_\_\_\_\_\_\_\_\_\_

**16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the radar system is the number of pulses that are transmitted per second.

**17.** Echoes that arrive after the transmission of the next pulse are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ echoes

18. The weakestsignal the receiver can detect is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_detectable signal.

19. MTI Stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. In the frequency-modulated CW radar, the transmitter frequency is changed as a function of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Code No: 16EC4202 SET- 3**

**GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY (Autonomous)**

**Cheeryal (V), Keesara (M), Medchal Dist. 501301**

**IVB.Tech ECE II Semester – I Mid Examinations, JANUARY – 2020**

**RADAR SYSTEMS**

**Time: 20 Mins Max. Marks: 10**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| CO1 | CO2 | CO3 |
| 3.5 M | 3M | 3.5 M |

**I. Choose the correct alternative: (10\*1/2= 5 M)**

**1.** The radar in which both transmission and reception is done using the same antenna are called [ ]

 A) Monostatic radar B) Bistatic Radar C) Monopole radar D) Dipole radar

**2.** The term radar cross section defines the **[ ]**

A) Scattering ability of the target

B) Power radiating ability of the radar
C) Amount of energy scattered by unwanted objects

D) Cross section of radar area through which energy is emitted

**3.**  A \_\_\_\_\_\_\_\_ determines the target range by measuring the round trip time of a pulsed microwave signal.  **[ ]**

A) Pulse Radar B) Doppler Radar `C) Cross Section RadarD) None of the mentioned

**4.** Which of the following is the biggest disadvantage of the CW Doppler radar **[ ]**

A) it does not give the target velocity B) it does not give the targetposition

C) a transponder is required at the target D) it does not give the target range.

**5.** The extent of a 1μs Radar pulse in the free space when it is transmitted is \_\_\_ meters [ ]

A)3 B)30 C) 300 D) None of these

**6.** Blind speed causes target to appear **\_\_\_\_\_\_\_\_\_\_ [ ]**

A). moving uniformly B) moving irregularly C) stationary D) intermittently

**7.** STALO stands for **[ ]**

 A) Standard local oscillator B) Stable L-band output

C) Stabilized local oscillator D) Saturated and linear oscillator

**8.** The remedy for the problem of “blind speed “ is **[ ]**

A) Variation of PRF B) Use of monopulse C) Use of MTI
D) Change in Doppler frequency

**9.** In MTI radar, COHO operates at \_\_\_\_\_\_\_\_ frequency **[ ]**

A) Pulse repetition B) Supply frequency C) Intermediate D) None of these

**10.**Pulse Repetition Time of a Radar is \_\_\_\_\_\_when the Pulse Repetition Frequency is 1500 Hz

**[ ]**

A) 5000 μsec B) 666 μsec C) 1200 μsec D) 60 μsec

**P. T. O.**

**II. Fill in the Blanks: (10\*1/2= 5 M)**

**11.** Echoes that arrive after the transmission of the next pulse are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ echoes

12. The weakestsignal the receiver can detect is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_detectable signal.

13. MTI Stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. In the frequency-modulated CW radar, the transmitter frequency is changed as a function of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**15.** PRF stands for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**16.** It is well known in the fields of optics and acoustics that if either the source of oscillation or the

observer of the oscillation is in motion, an apparent shift in frequency will result. This is called

 \_\_*\_\_\_\_\_\_\_\_\_\_\_*

**17.** The relation between the doppler frequency shift fd, radial velocity vr and transmitted frequency fo is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**18.** The range beyond which the targets appear as secondtime- around echoes is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**19.** If the target detection threshold were set too low, noise might exceed it and be mistaken for a target. This is called \_\_\_\_\_\_\_\_\_\_\_\_\_

**20. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the radar system is the number of pulses that are transmitted per second.

**Code No: 16EC4202 SET- 4**

**GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY (Autonomous)**

**Cheeryal (V), Keesara (M), Medchal Dist. 501301**

**IVB.Tech ECE II Semester – I Mid Examinations, JANUARY – 2020**

**RADAR SYSTEMS**

**Time: 20 Mins Max. Marks: 10**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| CO1 | CO2 | CO3 |
| 3.5 M | 3M | 3.5 M |

**I. Choose the correct alternative: (10\*1/2= 5 M)**

**1.** The extent of a 1μs Radar pulse in the free space when it is transmitted is \_\_\_ meters [ ]

A)3 B)30 C) 300 D) None of these

**2.** Blind speed causes target to appear **\_\_\_\_\_\_\_\_\_\_ [ ]**

A). moving uniformly B) moving irregularly C) stationary D) intermittently

**3.** STALO stands for **[ ]**

 A) Standard local oscillator B) Stable L-band output

C) Stabilized local oscillator D) Saturated and linear oscillator

**4.** The remedy for the problem of “blind speed “ is **[ ]**

A) Variation of PRF B) Use of monopulse C) Use of MTI
D) Change in Doppler frequency

**5.** In MTI radar, COHO operates at \_\_\_\_\_\_\_\_ frequency **[ ]**

A) Pulse repetition B) Supply frequency C) Intermediate D) None of these

**6.**Pulse Repetition Time of a Radar is \_\_\_\_\_\_when the Pulse Repetition Frequency is 1500 Hz

**[ ]**

A) 5000 μsec B) 666 μsec C) 1200 μsec D) 60 μsec

**7.** The radar in which both transmission and reception is done using the same antenna are called [ ]

 A) Monostatic radar B) Bistatic Radar C) Monopole radar D) Dipole radar

**8.** The term radar cross section defines the **[ ]**

A) Scattering ability of the target

B) Power radiating ability of the radar
C) Amount of energy scattered by unwanted objects

D) Cross section of radar area through which energy is emitted

**9.**  A \_\_\_\_\_\_\_\_ determines the target range by measuring the round trip time of a pulsed microwave signal.  **[ ]**

A) Pulse Radar B) Doppler Radar `C) Cross Section RadarD) None of the mentioned

**10.** Which of the following is the biggest disadvantage of the CW Doppler radar **[ ]**

A) it does not give the target velocity B) it does not give the targetposition

C) a transponder is required at the target D) it does not give the target range.

**P. T. O.**

**II. Fill in the Blanks: (10\*1/2= 5 M)**

**11.** PRF stands for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**12.** It is well known in the fields of optics and acoustics that if either the source of oscillation or the

observer of the oscillation is in motion, an apparent shift in frequency will result. This is called

 \_\_*\_\_\_\_\_\_\_\_\_\_\_*

**13.** The relation between the doppler frequency shift fd, radial velocity vr and transmitted frequency fo is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**14.** The range beyond which the targets appear as secondtime- around echoes is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**15.** If the target detection threshold were set too low, noise might exceed it and be mistaken for a target. This is called \_\_\_\_\_\_\_\_\_\_\_\_\_

**16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the radar system is the number of pulses that are transmitted per second.

**17.** Echoes that arrive after the transmission of the next pulse are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ echoes

18. The weakestsignal the receiver can detect is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_detectable signal.

19. MTI Stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. In the frequency-modulated CW radar, the transmitter frequency is changed as a function of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_