



C16-EC-403

5650

**BOARD DIPLOMA EXAMINATION, (C-16)
OCTOBER/NOVEMBER-2018
DECE - FOURTH SEMESTER EXAMINATION**

ADVANCED COMMUNICATION SYSTEMS

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

Instructions :

1. Answer **All** questions.
2. Each question carries **Three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Define primary and secondary constants of a transmission line.
2. Define Reflection Coefficient and SWR
3. Define Dominant mode and CutOff Wavelength in rectangular waveguide.
4. State the need for microwave bends and twists.
5. Define GUNN effect
6. List the applications of MicroStrip Antennas.
7. List the types of Indicators used in Rader Systems.
8. List the limitations of a CW Radar.
9. State the need for Satellite Communication.
10. Define the terms Apogee and Perigee in a satellite communication system.

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PART-B

10X5=50

- Instructions* :
1. Answer any **Five** questions.
 2. Each question carries **ten** marks.
 3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Derive the transmission line equations with respect to sending end and receiving end voltages.
12. Explain the working of E-Plane Tee and H-Plane Tee.
13. Explain the working of a Multicavity Klystron Amplifier with a neat diagram.
14. Explain the constructional features and working principle of GUNN Diode with a neat diagram.
15. Derive the basic radar range equation.
16. Draw and explain the block diagram of MIT radar.
17. Explain the working of a communication satellite with a neat block diagram.
18. (a) Explain the working of double conversion type transponder of a satellite.
(b) Explain the working principle of GPS.
