



C14-EC-501

**4630**

**BOARD DIPLOMA EXAMINATION, (C-14)  
OCT/NOV—2017  
DECE—FIFTH SEMESTER EXAMINATION**

ADVANCED COMMUNICATION

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

3×10=30

**Instructions** : (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Mention the applications of micro-strip antenna.
2. Mention the applications of reflex klystron.
3. State the disadvantages of pulsed radar.
4. Define reflection coefficient.
5. List different T-junctions.
6. List the limitations of a CW radar.
7. Define attenuation constant and phase constant.
8. Define uplink frequency and down-link frequency.

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9. What are the differences between ordinary semiconductor devices and microwave semiconductor devices?
10. Mention the applications of satellites.

**PART—B**

10×5=50

- Instructions :** (1) Answer *any five* questions.  
 (2) Each question carries **ten** marks.  
 (3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.
11. Draw the block diagram and explain the operation of fixed microwave link. 10
12. Describe constructional features and working principle of GUNN diode. 10
13. (a) Explain the operation of isolator with diagram. 5  
 (b) Explain the operation of circulator with diagram. 5
14. What is duplexer? Explain the operation of branch-type duplexer with diagram. 10
15. Explain regenerative transponder with block diagram. Mention the advantages. 10
- \* 16. Define characteristic impedance of a transmission line. Explain its significance. 3+7
17. (a) Explain instrument landing system. 7  
 (b) List the applications of various radar systems. 3
18. With a neat sketch, explain the operation of multi-cavity klystron amplifier. 10

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