

4630

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL-2019

DECE - FIFTH SEMESTER EXAMINATION

ADVANCED COMMUNICATIONS

Time:3 Hours

Total Marks:80

PART-A

3x10=30M

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

- 1) Define group velocity & phase velocity of transmission line .
- 2) Define primary constants of a transmission line.
- 3) List various bands in microwave frequency range.
- 4) Give the applications of TWT amplifier.
- * 5) List the applications of micro strip antennas.
- 6) List the advantages of micro wave semiconductors over electron beam devices.
- 7) State the basic principle of Radar.
- 8) List the types of indirectors used in radar systems.
- 9) Define apogee & perigee.
- 10) *Write the application of satellites.

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PART-B

5x10=50M

- Instructions:** 1) Answer any five questions.
2) Each Question carries 10 marks.
3) Answers should be comprehensive and criterion for valuation is the content but not the length of answer.

- 11) a) State the need for impedance matching. 3M
b) Explain the impedance matching using Quarter Wave Transformer Line. 7M
- 12) Explain the construction and working of Reflex Klystron.
- 13) a) Explain the operation of magic tee. 7M
b) State the need for circulators. 3M
- 14) Describe constructional features and working of Gunn Diode.
- 15) Draw and explain the block diagram of CW Radar.
- 16) Derive the basic Radar Range Equation.
- 17) Draw and explain the block diagram of Earth station.
- 18) Explain the methods of increasing channel capacity.

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