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C20-AEI–506

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BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER / NOVEMBER—2023

DAEI – FIFTH SEMESTER EXAMINATION

COMMUNICATION ENGINEERING

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. State the need for modulation in communication system.

2. List the merits and demerits of AM.

3. Write full form of DSBSC.

4. Define the term selectivity.

5. List the FM demodulator circuits.

6. List the different types of pulse modulation methods.

7. List any three applications of PAM.

8. Write the features of GSM mobile technology.

9. Write full forms of TDMA and CDMA.

10. List the transmitters used in fibre optic communication.

PART—B

8×5=40

Instructions : (1) Answer **all** questions.

(2) Each question carries **eight** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. *(a)* Explain PM waveforms and give their expression.

(OR)

(b) Explain AM generation using base circuits.

12. *(a)* Explain the principle of TRF receiver.

(OR)

(b) Draw the block diagram of superheterodyne receiver and explain each block.

13. *(a)* Explain the multiplexing methods with the help of the neat diagram.

(OR)

(b) Sketch the wave forms of PAM, PPM and PWM.

14. *(a)* Explain the working principle of satellite communication systems.

(OR)

(b) Explain the working of fibre optic communication with the block diagram.

15. *(a)* Explain the basic working principle of Rader with the block diagram.

(OR)

(b) Explain TDMA and FDMA.

PART—C

10×1=10

Instructions : (1) Answer the following question.

(2) The question carries **ten** marks.

(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. Explain the methods of FM generation by using varactor diode.

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