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C09–EC–304

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BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2018

DECE—THIRD 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. Define noise. List the types of noise.

3. Mention the effects of overmodulation.

4. Mention the advantages of SSB-SC.

5. Define pre-emphasis and de-emphasis used in FM signal.

6. Draw the block diagram of low-level AM transmitter.

7. Define the terms sensitivity and selectivity of radio receiver.

8. State the need of AGC.

9. What are the primary constants of transmission line?

10. List different layers of ionosphere.

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. *(a)* Explain the term 'distortion' and the types of distortion.

(b) Explain the measures for distortionless transmission.

12. Explain different types of external noise.

13. Derive time domain equation for an FM signal.

14. *(a)* Explain the method of producing DSB-SC.

(b) List the advantages of DSB-SC.

15. Draw the block diagram of FM transmitter using reactance method and explain its operation.

16. Draw the block diagram of superheterodyne receiver and explain the function of each block.

17. Explain sky wave propagation of EM waves.

18. Describe stub matching in transmission lines.

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