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C09-EC-403

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**BOARD DIPLOMA EXAMINATION, (C-09)
OCTOBER/NOVEMBER-2018
DECE - FOURTH SEMESTER EXAMINATION**

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. Briefly explain error detection using parity bit.
2. Write three differences between synchronous and asynchronous communication.
3. What is the principle of vocoder?
- * 4. What is TMDA?
5. Mention the applications of FDM.
6. What is the difference between circuit switching and packet switching?
7. Mention the advantages of tone dialing.
8. Mention the applications of yagi antenna and helical antenna.
9. Define front – to –back ratio and directivity of antenna.
10. How the size of antenna is reduced with increasing frequency?

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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. Explain the process of delta modulation. Mention the advantages and limitations.

12. (a) State sampling theorem and explain its significance.

(b) Explain PAM and PWM.

13. (a) Describe the principle of spread – spectrum communication.

(b) Explain direct sequence system.

14. (a) State the need of modem in data communication.

(b) Describe the operation of telephone modem.

15. Explain the operation of fax machine with block diagram.

16. (a) Explain the features of ISDN.

(b) Explain the operation of EPABX.

17. Explain the constructional features and radiation pattern of end fire array and turnstile antenna.

18. (a) Define decibel and neper.

(b) What is antenna? Mention any four applications of antenna.

(c) define radiation resistance and draw radiation pattern of isotropic antenna and half wave dipole.

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