

**4458****BOARD DIPLOMA EXAMINATION, (C-14)****OCT / NOV-2017****DECE-FOURTH SEMESTER EXAMINATION****DIGITAL COMMUNICATIONS**

Time : 3 Hours ]

[ Total Marks : 80

**PART - A**

3 x 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. Compare analog and digital communication techniques.
2. Classify the pulse modulation techniques.
3. Define Bit – Over head.
4. Explain RZ line coding technique.
5. Distinguish between Bit rate and Baud rate.
6. What are the advantages of ASK?
7. List the type of Multiplexing Techniques.
8. What are the differences between FAX and DATA modem?
9. What are the advantages of electronics telephony over manual telephony?
10. List the types of Dialing.

**PART - B**

5 x 10 = 50

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

11. a) Explain the process of Delta Modulation with Block diagram.  
b) Define Bit rate.
12. a) Explain how to function the Vocoder.  
b) Define Dynamic Range.
13. Define error in electronics communication system. Explain the different error detection and correction techniques briefly.
14. a) Explain the synchronous transmission in detail.  
b) Explain the conversion between parallel and serial data.
15. a) Explain the BPSK modulator.  
b) List the advantages of BPSK.
16. a) Explain the Quadrature Amplitude Modulation (QAM)?  
b) Explain the ASK modulator with Block Diagram.
17. a) Explain the operation of Telephone Modem.  
b) Explain the Asynchronous Digital Subscriber Line Technology.
18. a) Explain the functions of signals on Local – Loop telephone line.  
b) What are the applications of Internet Telephony?

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