

**FACULTY OF ENGINEERING****B.E. 3/4 (ECE) II – Semester (New) (Main) Examination, June 2017****Subject: Digital Communication****Time: 3 Hours****Max.Marks: 75****Note: Answer all questions from Part A and any five questions from Part B.****PART – A (25 Marks)**

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|----|--|---|
| 1  | Explain the significance of eye pattern.   | 2 |
| 2  | What are the advantages of DM over DPCM?   | 2 |
| 3  | What do you mean by source coding?   | 2 |
| 4  | Define the following terms:  |   |
|    | a) Entropy   |   |
|    | b) Uncertainty   |   |
|    | c) Information   | 3 |
| 5  | Define hamming distance and calculate its value for two code words 11100 and 11011.  | 3 |
| 6  | Mention the properties of cyclic code.   | 2 |
| 7  | Compare digital modulation schemes through bandwidth and power requirements.   | 3 |
| 8  | A binary FSK system employs two signalling frequencies $f_1$ and $f_2$ . Lower frequency $f_1 = 1200$ Hz. Band rate is 500 band. Calculate $f_2$ . | 3 |
| 9  | Discuss the properties of PN sequence.   | 3 |
| 10 | Give applications of HFSS.   | 2 |

**PART – B (5x10 = 50 Marks)**

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|-------|---|---|
| 11 a) | Discuss the advantages and disadvantages of Digital Communication. Also draw the block diagram of digital communication system with functional description of each block. | 8 |
| b)    | Write the advantages of adaptive delta modulation technique over Delta Modulation.  | 2 |