Reg. No.

Question Paper Code : 51378

B.E/B. Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Third Semester

Computer Science and Engineering

CS 2204/CS 36/EC 1207/080230008/10144 CS 305 – ANALOG AND DIGITAL COMMUNICATION

(Regulations 2008/2010)

(Common to 10144 CS 305 – Analog and Digital Communication for B.E. (Part-time) Second Semester – CSE – Regulations 2010)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. Define modulation index of AM wave.

2. Distinguish between FM and PM.

3. Define bit rate and baud rate.

4. Draw the block diagram of OPSK transmitter.

5. What is quantization noise ?

6. What is inter symbol interference ?

7. What is a parallel interface ?

8. Distinguish between low speed and high speed modems.

9. What is meant by spread spectrum modulation ?

10. What is wireless communication ?

PART – B (5 × 16 = 80 Marks)

11. (a) (i) Explain about FM and PM. **(8)**

    (ii) Explain Bandwidth requirements for angle modulated wave. **(8)**

    OR

    (b) (i) Explain the principle of amplitude modulation, voltage and power distribution. **(8)**

    (ii) Write a note on frequency analysis of angle modulated wave. **(8)**

12. (a) (i) Describe the Shannon limit for information capacity. **(6)**

    (ii) Explain the transmitter and receiver of binary phase shift keying communication system with block diagram. **(10)**

    OR

    (b) (i) Explain the principle of operation of FSK transmitter and receiver. **(8)**

    (ii) Explain about squaring loop and costas loop. **(8)**

13. (a) Describe in detail about pulse code modulation (PCM). **(16)**

    OR

    (b) Describe in detail about Delta modulation, explain slope overload error and granular noise. **(16)**

14. (a) Explain in detail about the history and standards organizations for data communication. **(16)**

    OR

    (b) Describe in detail the error detection and correction codes with examples. **(16)**

15. (a) Explain in detail the DS spread spectrum and FH spread spectrum techniques with block diagram. **(16)**

    OR

    (b) Explain in detail about TDMA, FDMA and CDMA. **(16)**

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