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Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 31369

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Fifth Semester

Electronics and Instrumentation Engineering

EC 2315/EI 55/10133 EE 501 — COMMUNICATION ENGINEERING

(Regulation 2008/2010)

(Common to PTEC 2315 – Communication Engineering for B.E. (Part–Time) Fourth Semester Electronics and Instrumentation Engineering – Regulation 2009)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define characteristic impedance of a transmission line.

2. Define critical frequency related to sky wave propagation.

3. Define modulation index for amplitude modulation.

4. State Carson's rule.

5. State sampling theorem.

6. Compare the bandwidth efficiency of PSK and FSK.

7. What is ISDN?

8. Name the seven layers of ISO-OSI architecture.

9. State Snell's law.

10. What is handoff in cellular communication?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Write notes on space wave propagation and factors to be considered in space wave communication. (10)

(ii) Write notes on ground wave propagation. (6)

Or

(b) (i) Write notes on different types of transmission lines. (10)

(ii) Why modulation is required? (6)

12. (a) With waveforms and circuit diagrams explain the amplitude modulation and demodulation. (16)

Or

(b) With relevant diagrams, explain the direct and indirect methods of generating frequency modulated waves. (16)

13. (a) With block diagrams, explain pulse code modulation and demodulation. (16)

Or

(b) (i) With block diagrams, explain the QPSK modulation and demodulation. (10)

(ii) Write notes on T1 carrier multiplexing system. (6)

14. (a) Give a detailed account of ISDN network and protocol architecture and transmission channels. (16)

Or

(b) (i) Explain the different types of LAN technologies. (10)

(ii) What is error control coding? Explain about any one error control code. (6)

15. (a) With block diagram of uplink and downlink, explain the operation of satellite communication system. (16)

Or

(b) With block diagram, explain the operation of optical fiber communication system. (16)
