

R09**Code: 9A12302**

B.Tech II Year II Semester (R09) Supplementary Examinations December/January 2015/2016

DATA COMMUNICATION SYSTEMS
(Computer Science & Systems Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Write short notes on:
 - (a) Binary phase shift keying.
 - (b) Quadrature amplitude modulation.
- 2
 - (a) Explain metallic transmission line types with examples.
 - (b) Briefly describe modes of propagation and index profile of optical fiber cable.
- 3
 - (a) Explain Frequency-division multiplexing.
 - (b) List advantages of wavelength division multiplexing.
- 4
 - (a) Explain wave attenuation and absorption.
 - (b) Compare three modes of propagating electromagnetic waves.
- 5
 - (a) Explain how caller ID operates and when it is used.
 - (b) Describe the operation of electronic telephone.
- 6
 - (a) Explain the functionalities of cellular system topology.
 - (b) Explain USDC control channels and IS-136.2.
- 7
 - (a) Explain the terms retransmission and forward error correction.
 - (b) Describe error correction procedure in hamming codes.
- 8 Find the bandwidth efficiency for a bell system 202-compatible modem, where the data transmission rate is 1200 bps and an available bandwidth is 2700 Hz.
