B.E. (Information Technology) Third Semester (C.B.S.)
Data Communication

P. Pages : 2

Time : Three Hours

|| *0525* ||

Max. Marks : 80

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Notes :   1.   All questions carry marks as indicated.
            2.   Solve Question 1 OR Questions No. 2.
            3.   Solve Question 3 OR Questions No. 4.
            4.   Solve Question 5 OR Questions No. 6.
            5.   Solve Question 7 OR Questions No. 8.
            6.   Solve Question 9 OR Questions No. 10.
            7.   Solve Question 11 OR Questions No. 12.
            8.   Due credit will be given to neatness and adequate dimensions.
            9.   Assume suitable data whenever necessary.

1. a) Explain in detail communication model. **7**

   b) Describe data representation technique in detail. **6**

OR

2. a) Explain data flow techniques half duplex, Full duplex with help of diagrams. **7**

   b) Explain the communication networking. **6**

3. a) What is a need of protocol architecture. Explain it with example. **5**

   b) Describe in details OSI model. **8**

OR

4. a) Difference between OSI & TCP model. **8**

   b) Explain addressing physical, logical & port. **5**

5. a) Difference between analog & digital signal. **4**

   b) Explain delta modulation. **5**

   c) Explain the following with suitable diagram. **5**
       i)   Polar RZ   ii)   AMI

OR

6. a) Explain digital – to – digital conversion line coding & block coding. **7**

   b) State and explain three causes of impairments. **7**

7. a) Explain the concept of ASK, PSK, FSK in detail. **6**

	b)	Explain packet switching & circuit switching with example.	**7**

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8.	a)	Describe analog to analog conversion. Frequency modulation and phase modulation.	**7**
	b)	Explain time division multiplexing.	**6**

9.	a)	Write note on. i) Twisted pair cable. ii) Optical fiber cable.	**8**
	b)	Write note on connectors of. i) Co-axial cable. ii) Optical fiber.	**6**

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10.	a)	Explain microwave, satellite, infrared in details.	**8**
	b)	What is the difference between omnidirectional waves and unidirectional waves.	**6**
11.	a)	Explain different topologies.	**6**
	b)	Describe LAN and internetworking.	**7**

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OR

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12.	a)	Explain the concept of backbone network.	**7**
	b)	Explain MAN and WAN. with example.	**6**

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