

(4)

of the OSI layer handles each of the following functions : 7½

- (i) Breaking the transmitted packets into frames
- (ii) Determining which route through the subnet to use
- (iii) Providing synchronizing

7. Compare and contrast OSI reference model with TCP/IP reference model. With the help of diagram elaborate TCP/IP reference model. Discuss the role of each layer in detail. 7½

Unit - IV

8. (a) Explain the key services provided by Integrated Services Digital Networks (ISDN). 5
- (b) Write short note on Bluetooth services. 2½
9. (a) Explain the basic features of Asynchronous Transfer Mode (ATM). 3½
- (b) Write short note on LAN IEE 80.211. 4

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B.A./B.Sc. (Part-I) Examination, 2015

(New Syllabus)

COMPUTER APPLICATION

Second Paper

(Data Communication)

Time Allowed : Three Hours] [Maximum Marks : 50

Note : Answer five question in all. Question No. 1 is compulsory. Attempt one question from each of the four units.

1. (a) By giving examples differentiate between simplex and full duplex communication 2×10=20
- (b) Explain the terms bit rate and baud rate.
- (c) Give the relative advantages and disadvantages between analog and digital transmission of data.

(2)

- (d) What are modems? What purpose do they serve in data communication systems?
- (e) Differentiate between asynchronous and synchronous modes of data transmission.
- (f) What are the advantages of ATM? How does it differ from packet switching.
- (g) Define protocol. Give two examples of protocol.
- (h) What is the principal difference between connection-less communication and connection oriented communication?
- (i) Explain the concept of frequency division multiplexing (FDM).
- (j) Compare and contrast the working of Switches and Routers.

Unit - I

- 2. Classify the Computer Networks with respect to their geographical area of converge, Topology, data transmission, error rates etc by giving examples. 7½

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(3)

- 3. (a) Describe different Network topologies by giving diagrammatical representation and relative advantages and disadvantages. 5
- (b) Write short note on distributed processing. 2½

Unit - II

- 4. Explain the term modulation. How does it help in data communication? Illustrate with appropriate diagram the following : 7½
 - (i) Amplitude Modulation
 - (ii) Frequency Modulation
 - (iii) Phase Modulation
- 5. (a) Discuss the main feature of satellite communication. Explain how it is different from fiber optic and microwave communication? 5
- (b) Write a short note on various switching techniques. 2½

Unit - III

- 6. Explain various layers of OSI reference model and explain the functions of each layer. Which

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