

Prime

IV/BCA/403

2016

(4th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Paper No. : BCA-403

(Computer Networking)

(New Course)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

*The figures in the margin indicate full marks
for the questions*

1. (a) What do you mean by networking?
Explain the different components of
network. 1+4=5
- (b) What is transmission impairment?
Explain the common types of
transmission impairment in data
communication. 5

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(Turn Over)

Or

(c) Differentiate between OSI reference model and TCP/IP model. $2+2=4$

(d) What is topology? Explain the different types of topology with diagram. $1+5=6$

2. (a) Explain the difference between circuit switching and datagram network with suitable diagram. $3+3=6$

(b) Write the advantages of fiber-optic cable. 4

Or

(c) Distinguish between radio waves and microwaves. 4

(d) What is TDM? Explain the difference between synchronous TDM and statistical TDM. $2+4=6$

3. (a) Write the functions of data link layer. 4

(b) How are error detection and error correction different? Discuss the role of hamming code and parity bit in checking error. $2+4=6$

Or

(c) Distinguish between hamming distance and minimum hamming distance with suitable example. 4

(3)

(d) Using the process of CRC error checking, perform the operation where the divisor is 1011 and dividend is 1001 and check whether error is contained by the code word. 6

4. (a) What is IP address? Compare and write the difference between IPv4 and IPv6. 1+4=5

(b) What is UDP? Explain the UDP operation. 1+4=5

Or

✓ (c) What is TCP? Write down the services offered by TCP. 1+4=5

(d) Explain the three-way handshaking method of TCP for connection establishment with diagram. 5

✓ 5. (a) What is Domain Name System? Explain the different types of DNS by giving example. 1+3=4

(b) Explain the following : 6
(i) Blue tooth
(ii) FTP

$$2^{m-1}$$

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$$k = m - m$$

(Turn Over)

(4)

Or

(c) Explain the mechanism of remote login with Telnet.

5

(d) What is Ethernet? Compare and write the difference between Fast Ethernet and Gigabit Ethernet.

1+4=5



Handwritten binary calculations:

$$\begin{array}{r} 1011 \\ 1001 \\ \hline 0110 \\ 10110 \\ \hline 11100 \end{array}$$