

M.Sc. 3rd Semester Examination, 2011

COMPUTER SCIENCE

PAPER – CS/MSC/ 301 (M1/M2)

Full Marks : 50

Time : 2 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

MODULE – 1

(Computer Network)

[Marks : 25]

Answer any two questions

1. (a) What is the difference between a port address, a logical address and a physical address ? 3
- (b) Which type of address changes from hop to hop. 2

(Turn Over)

(c) What are different variants of polar encoding ?
Discuss through examples. 1 + 4

2. (a) What is meant by error detection and correction code ? Explain the operation of CRC on following data : 5

Message : 1100101011001010

Generator : 101

(b) Why are addresses needed in poll/select but not in ENQ/ACK ? 2

(c) Which sliding window ARQ is more popular ? Why ? 3

3. (a) Explain the header of TCP packet. 5

(b) What do you mean by baseband and broadband. Explain briefly the access method CS MA/CD. 2 + 3

4. Write short notes on any *four* : $2\frac{1}{2} \times 4$

(i) QAM (Quadrature Amplitude Modulation)

(ii) Topology

(iii) Packet switching and circuit switching

- (iv) ATM cell
- (v) Fiber-optic cable
- (vi) Leaky bucket algorithm
- (vii) Routing.

[*Internal Assessment – 5 Marks*]

MODULE – 2

(*Internet Technology*)

[*Marks : 25*]

Answer any *two* questions

1. (a) Distinguish between bridges and switches. 2
- (b) Describe subnetting with suitable example. 3
- (c) Differentiate between multicasting and broadcasting. 2
- (d) Briefly describe the mechanism of any one of the interior routing protocol. 3
2. (a) How link state packets are built in link state routing? 3

- (b) What are the factors that determine the 'Quality of Service (QoS)' of a network. Briefly describe with suitable examples. 4
- (c) What are the factors that cause congestion in a network ? 3
3. (a) Describe Client-Server Model. 5
- (b) What is URL ? 2
- (c) What is Telnet ? 2
- (d) What is TFTP ? 1
4. Compare or write short notes on any *four* : $2\frac{1}{2} \times 4$
- (i) LAN and WAN (Compare)
- (ii) WWW
- (iii) DNS
- (iv) FTP
- (v) Routing
- (vi) ASP. NET.

[Internal Assessment – 5 Marks]