



Name :
Roll No. :
Invigilator's Signature :

**CS / MBA(NEW) / SEM-4(FT) / SM-406 / 2010
2010**

FUNDAMENTALS OF NETWORKING

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

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

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) Transmission media are usually categorized as
 - a) fixed or unfixed
 - b) guided or unguided
 - c) determinate or indeterminate
 - d) metallic or non-metallic.
- ii) Transmission media are closest to the layer.
 - a) physical
 - b) network
 - c) transport
 - d) application.



8. a) Write a note on the OSI reference model.
- b) Encode the following binary string using differential Manchester encoding scheme :
- 10011101011.
- c) What do you understand by Inverse Multiplexing ?
- d) Write a short note on Data Link Layer. 8 + 2 + 2 + 3
9. a) Explain various classes of IP address.
- b) Find the class, netid and hostid for each address :
- i) 4.23.145.90
- ii) 246.7.3.8
- iii) 129.6.8.4
- iv) 227.34.78.7
- v) 198.76.9.23.
- c) What is sub-netting and why is it required ? 5 + 5 + 5
10. a) Explain the OSI reference model.
- b) Compare the OSI model with TCP/IP reference model.
- 9 + 6
11. a) Draw the representation of digital signal 1001110 for NRZ-L, NRZ-I and Manchester coding waveforms and explain.
- b) Comment on the statement "Baud rate and bps are essentially the same".
- c) Why are protocols and standards needed in data communications ? 7 + 4 + 4
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