Name : ....

Roll No. : ....

Invigilator's Signature : ....

CS/MBA/SEM-4 FT & 6 PT/SM-406/2013
2013
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
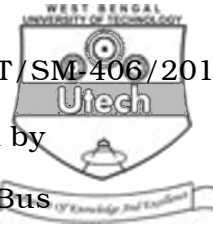as far as practicable.*

GROUP – A
(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : 10 × 1 = 10

    i)   HDLC stands for

        a)   Hard Drive Link Control

        b)   High Density Layer Control

        c)   High Data Level Control

        d)   High Level Data Link Control.

    ii) Which among the following is the current standard for HDLC that replaces all of previous standards ?

        a)   ISO 3309   b)   ISO 13239

        c)   ISO 4335   d)   ISO 6256.

    iii) Forming data packets, and adding source and destination port numbers in the header of each data packet is the function of

        a)   application layer   b)   physical layer

        c)   data-link layer   d)   transport layer.

25024 (MBA)   [Turn over

iv) Web conferencing, in which the streams of audio and video must be synchronous to avoid so-called lip-synch problems is an application of

a) presentation layer   b) application layer

c) session layer   d) network layer.

v) Which of the following sub-layers of Data Link Layer emulates a full-duplex logical communication channel in a multipoint network ?

a) LLC layer   b) MAC layer

c) Both (a) & (b)   d) None of these.

vi) TDM (Time Division Multiplexing) can be distinguished from packet mode communication because

a) the time slots are recurrent in a fixed order and pre-allocated to the channels

b) the time slots are scheduled on a packet-by-packet basis

c) both (a) & (b)

d) none of these.

vii) Sampling and Quantization are the features of

a) PPM   b) PAM

c) PCM   d) All of these.

viii) Network switches differ from Network hubs since

a) switches can have ports of different speed

b) hubs can have ports of different speed

c) both (a) & (b)

d) none of these.

ix) The Token Passing mechanism is shared by

a) ARCNET   b) Token Bus

c) FDDI   d) All of these.

x) The practice of sending unwanted e-mail messages, frequently with commercial content, in large quantities to an indiscriminate set of recipients is known as

a) E-mail spam

b) Unsolicited Bulk E-mail (UBE)

c) Junk Mail

d) All of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.   3 × 5 = 15

2. Compare circuit switching, packet switching and massage switching.

3. Compare IPV4 and IPV6.

4. Define Repeater, Hub, Router and Bridge.

5. Explain carrier sense multiple access protocols.

6. What is multiplexing ? Discuss the different types of multiplexing.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. Describe OSI model. Compare the OSI model with TCP/IP model. 10 + 5

8. a) What is classful address ? List the classes in classful addressing.

   b) Explain the various class IPs. 8 + 7

9. a) What is mobile computing ? How is it different from WAN ?

   b) Explain the feature of WAP.

   c) What is the limitation of IPV4 ? 5 + 5 + 5

10. Discuss the different types of network topology with their advantages and disadvantages.

11. Write short notes on any *three* of the following : 3 × 5

    a) Digital signature

    b) DLL

    c) Distributed database

    d) ISDN

    e) IP address and IP diagram.

─────────