FUNDAMENTAL OF NETWORKING (SEMESTERS - 4 & 6)

CS/MBA/SEM-(4 FT & 6 PT)/SM-406/09

1. ....
Signature of Invigilator

2. ....
Signature of the Officer-in-Charge

Reg. No.

Roll No. of the Candidate

CS/MBA/SEM-(4 FT & 6 PT)/SM-406/09
ENGINEERING & MANAGEMENT EXAMINATIONS, APRIL – 2009
FUNDAMENTAL OF NETWORKING (SEMESTERS - 4 & 6)

Time : 3 Hours]   [Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
   b) For **Groups – B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
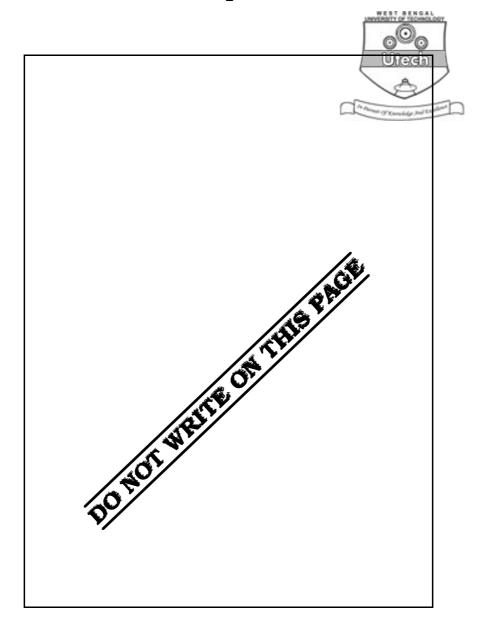9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

FOR OFFICE USE / EVALUATION ONLY
Marks Obtained

	Group – A									Group – B		Group – C					Total Marks	Examiner's Signature
Question Number																		
Marks Obtained																		

....
Head-Examiner/Co-Ordinator/Scrutineer

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GROUP – A

(Multiple Choice Type Questions)

1.   Choose the correct alternatives for any *ten* of the following :   10 × 1 = 10

   i)   ………………… allows a host to discover its Internet address when it knows only its
        physical address.

        a)   ARP   b)   RARP

        c)   ICMP   d)   SMTP.

   ii)   The size of an ATM cell is ………………… bytes.

        a)   48   b)   53

        c)   54   d)   none of these.

   iii) The Medium Access Control sub-layer resides in ………………… layer of OSI
        model.

        a)   Physical   b)   Data Link

        c)   Network   d)   Transport.

   iv)   Sampling and Quantization are the features of

        a)   PPM   b)   PAM

        c)   PCM   d)   all of these.

v) Network Switches differ from Network Hubs is that

    a) Switches can have ports of different speed

    b) Hubs can have ports of different speed

    c) both (a) and (b)

    d) none of these.

vi) The Token passing mechanism is shared by

    a) ARCNET   b) Token Bus

    c) FDDI d)   All of these.

vii) The downlink and uplink channels of a satellite are separated

    a) in time   b) in frequency

    c) in space   d) not separated.

viii) CSMA/CD is

    a) a distributed medium access protocol

    b) a distributed and co-operative medium access protocol

    c) a co-operative but not a distributed access protocol

    d) none of these.

ix) Which of the following is a class C host address ?

    a) 230.0.0.0   b) 130.4.5.6

    c) 200.1.2.3   d) 30.4.5.6.

x) TCP is a / an

    a) reliable connection oriented protocol

    b) unreliable connection oriented protocol

    c) reliable connectionless protocol

    d) unreliable connectionless protocol.

xi) QAM (Quadrature Amplitude Modulation) is

    a) PSK combined with AM   b) FSK combined with AM

    c) ASK combined with AM   d) QPSK combined with AM.

xii) A .... operates at the Network layer.

    a) Router   b) Bridge

    c) Repeater   d) All of these.

GROUP – B

(Short Answer Type Questions)

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

2. Explain what is Classful addressing. List the classes in Classful addressing.

3. What do you mean by the term 'Cryptography' ? Differentiate between 'Symmetric key' and 'Asymmetric key'.

4. Explain the difference between firewall and anti-virus software.

5. Compare circuit switching, packet switching and message switching.

6. What is transmission impairment ? What are its causes ?   2 + 3

7. What are needs & advantages of digital signature ?

GROUP – C

(Long Answer Type Questions)

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

8. What do mean when we say that a bridge can filter traffic ? Why is filtering important ? How is a repeater different from an amplifier ?

What are the basic advantages of a Distributed Database Management System.

4 + 2 + 4 + 5

9. a) What do you mean by routing ?

   b) Differentiate between non-adaptive and adaptive routing algorithms with examples.

   c) Explain Shortest Path Routing with diagrams. 4 + 4 + 7

10. a) With the help of a neat diagram, describe an ATM cell. 9

    b) What are the advantages of computer network ? 6

11. Explain Mobile Computing. How is it different from WAN ? Explain features of WAP.

6 + 4 + 5

12. a) Explain the following with necessary diagram :

    Amplitude Modulation (AM), Frequency Modulation (FM), Pulse Code Modulation
    (PCM) , Multiplexing.

    b) What are the major advantages of Digital Communication over Analogue Communication ? 10 + 5

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

    a) Write short note on Network topology

    b) Write short note on OSI layers

    c) Compare IPV4 and IPV6

    d) Write short note on different fields used in IP datagram

    e) Define Repeater, Bridge, Router & Gateway

    f) Differentiate between TDM & FDM. Explain with diagram.

END