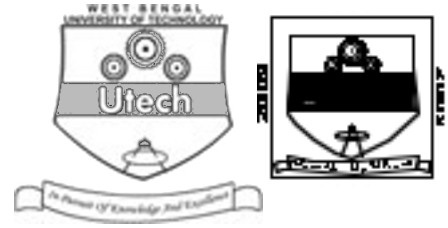


## ADVANCED NETWORKING ( SEMESTER - 6 )

**CS/BCA/SEM-6/BCAE-601A/09**



1. ....  
Signature of Invigilator

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

**Reg. No.**

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**Roll No. of the Candidate**

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**CS/BCA/SEM-6/BCAE-601A/09**  
**ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009**  
**ADVANCED NETWORKING ( SEMESTER - 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**

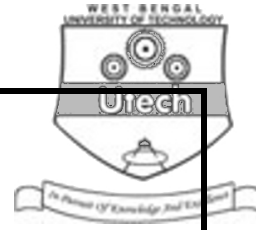
**FOR OFFICE USE / EVALUATION ONLY**

Marks Obtained

Question Number	Group – A					Group – B					Group – C					Total Marks	Examiner's Signature
<b>Marks Obtained</b>																	

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

**6634 (03/06)**



**DO NOT WRITE ON THIS PAGE**



**ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009**  
**ADVANCED NETWORKING**  
**SEMESTER - 6**



Time : 3 Hours ]

[ Full Marks : 70

**GROUP – A**

**( Multiple Choice Type Questions )**

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

- i) Encryption is performed in
  - a) Application Layer
  - b) Presentation Layer
  - c) Session Layer
  - d) Data Link Layer.
  
- ii) Flow control is performed in
  - a) Transport Layer
  - b) Network Layer
  - c) Session Layer
  - d) Data Link Layer.
  
- iii) Baseband is
  - a) Digital Signal
  - b) Analog Signal
  - c) none of these
  - d) all of these.
  
- iv) Frame is a group of
  - a) Bits
  - b) Signals
  - c) Devices
  - d) Mediums.
  
- v) FDDI Stands for
  - a) Fibre Distributed Digital Interface
  - b) Fibre Distributed Data Interface
  - c) Fibre Distributed Device Interface
  - d) Frequency Distributed Data Interface.
  
- vi) "HOST" in the network, is
  - a) Bits
  - b) Signals
  - c) Computer
  - d) Mediums.



vii) HDLC Protocol works in

- |                      |                       |
|----------------------|-----------------------|
| a) Application Layer | b) Presentation Layer |
| c) Session Layer     | d) Data Link Layer.   |

viii) The slowest transmission speeds are those of

- |                       |                  |
|-----------------------|------------------|
| a) Twisted pair wire  | b) Coaxial cable |
| c) Twisted pair cable | d) Microwaves.   |

ix) STDM means

- a) Statistical Time Division Multiplexing
- b) Synchronous Time Division Multiplexing
- c) Signalled Time Division Multiplexing
- d) Solo Time Division Multiplexing.

x) Monomode Fibre is the

- |                   |                   |
|-------------------|-------------------|
| a) Fastest medium | b) Slowest medium |
| c) Slower medium  | d) None of these. |

**GROUP – B**

**( Short Answer Type Questions )**

Answer any *three* of the following.

3 × 5 = 15

2. What is Connection-oriented Service ? What is a Packet ? What is Broadcast Network ? What is Protocol ? What is Token ? 1 + 1 + 1 + 1 + 1
3. Define Multiplexing. Explain Time-Division Multiplexing with proper diagram. 1 + 4
4. Write the differences between the following :
  - a) TDM and FDM
  - b) MAC-Addressing and IP-Addressing.  $2 \frac{1}{2} + 2 \frac{1}{2}$
5. Explain various stations for HDLC. 5
6. Explain MULTIPATH FADING in Network. 5



5

## GROUP - C

## ( Long Answer Type Questions )

Answer any *three* questions.

3 × 15 = 45

7. Why is multilayered reference model preferred over single layered structure ? Discuss the functions of Network and Transport Layer ? Why is circuit switching preferred over packet switching in case of real time communication ? Draw the block digram ( showing each function ) of PCM considering sender, transmission channel and receiver. 4 + 4 + 3 + 4
8. Suppose the sender wants to send the word "happy". Code it using ASCII and generate using 2-D parity. Which data is actually sent to the receiver. Why is acknowledgment numbered in stop-and-wait ARQ ? Discuss a situation when unnumbered acknowledgements can create confusion in the sender and receiver ends. Given a 10-bit sequence 1010011110 and a divisor polynomial is  $x^2 + x^1 + x^0$  . Find the CRC. 5 + 2 + 4 + 4
9. Derive the expression of the efficiency of Pure ALOHA. Compare it with slotted ALOHA. Explain CDMA technique with a suitable example. Why is address field always set to all 1's in PPP frame format ? 5 + 2 + 6 + 2
10. What is default mask ? Why is dynamic routing algorithm preferred over static routing algorithm in network which changes continuously ? Explain different steps in Link-state routing algorithm with proper example.
- Why is selective flooding differing from flooding technique ? 3 + 3 + 6 + 3
11. Write short notes on any *three* : 3 × 5
- POP
  - Digital Signature
  - ATM
  - BRI and PRI services of ISDN
  - DNS.

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 END