

05847

## BACHELOR IN COMPUTER APPLICATIONS

Term-End Examination

December, 2010

### CS-69 : TCP/IP PROGRAMMING

Time : 2 hours

Maximum Marks : 60

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**Note :** Question number 1 is compulsory. Answer any two questions from the rest.

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1. (a) Answer the following questions in brief.
- (i) Which address among the following changes from hop to hop ! Explain. 5
    - Physical address
    - Logical address
    - Port address
  - (ii) What is the first bit, the first two bits and the first three bits of class A, class B and class C addresses respectively ? 3
  - (iii) What is the purpose of classless addressing ? 2
  - (iv) Where the UDP protocol is used ? 2
  - (v) Does UDP support sliding window mechanism ? 1
  - (vi) How does TCP manage the segment that contains urgent data ? 2

- (b) Show the status of sender's and receiver's windows for 3-bit sliding window of TCP at different stages of data transfer. 5
- (c) (i) What are the tasks performed by TCP and IP when it receives a packet ? 8
- (ii) When the datagram will be discarded from the system ? 2
2. (a) Differentiate between the followings : 9
- (i) Class A and Class C address
- (ii) TCP and UDP
- (iii) Connection oriented and connectionless services
- (b) Discuss the name resolution process used in Internet. 6
3. (a) Explain the purpose and importance of the following header fields of TCP and IP 10
- (i) Version
- (ii) Type of service
- (iii) Header checksum
- (iv) Sequence number
- (v) Protocol
- (b) Explain the IP routing mechanism. 5

4. (a) Explain the following terms : 10
- (i) Authentication and Authorization
  - (ii) Hierarchical naming scheme
  - (iii) Subnet mask
  - (iv) Congestion
  - (v) Fragmentation
- (b) Briefly describe the UDP header format and its fields. 5
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