

**B.TECH. ELECTRONICS AND  
COMMUNICATION ENGINEERING (BTECVI)**

**Term-End Examination**

**June, 2013**

**BIEL-021 : COMPUTER COMMUNICATION  
NETWORKS**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : (i) Attempt any seven questions.  
(ii) All questions carry equal marks.*

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1. Compare TCP/IP and OSI models. Also explain working of different layers. 10
  
  2. (a) Discuss briefly the error and flow control in Data link control. 5
  
  - (b) Consider a frame consisting of four fields, A, B, C and D. Field A is always present and is of fixed length. Fields B and C are of Variable length and optional. Field D is fixed and always present. What are the identifiers and delimiters required ? 5
  
  3. Discuss in detail "IEEE 802.11 Wireless Local area Network." 10

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4. List four common LAN topologies and briefly describe their methods of operation. 10
5. (a) List and briefly define four application areas for Backbone and virtual LANs. 6
- (b) How do the key requirements for computer room networks differ from those for personal Computer local area networks ? 4
6. (a) Compare IPv6 and IPv4 Headers. 5
- (b) Express the following IP addresses in binary form and identify its address classes. 5
- (i) 200.42. 129. 16
- (ii) 14.82. 19.52
7. What are the two types of routing protocols for the Internet ? What is the main difference between these two categories of protocols in terms of the routing principles ? Give an example for each. 10
8. (a) What is the difference between UDP and TCP internet protocols ? 5
- (b) What is DNS Cache ? How will you see the contents of the DNS cache ? 5

9. (a) How can the station determine the success or failure of the transmission ? 4
- (b) Define controlled access and list three protocols in this category. 6
10. Write short notes on **any two** of the following : **2x5=10**
- (a) Random access
- (b) HDLC
- (c) OSI model
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