

06329

BCA (REVISED)
Term-End Examination
June, 2014

**BCS-041 : FUNDAMENTAL OF COMPUTER
NETWORKS**

*Time : 3 hours**Maximum Marks : 100*

Note : Question no. 1 is compulsory. Attempt any three questions from the rest.

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| 1. | (a) What are the two sublayers of data link layer ? Explain the characteristics of these layers. | 7 |
| | (b) Differentiate between parallel and serial communication using an example for each. | 6 |
| | (c) Discuss the importance of DHCP, BOOTP and SNMP at Application layer of TCP/IP model. | 6 |
| | (d) How transport layer of OSI model provide flow control to improve the issue of congestion in the data transfer ? | 8 |
| | (e) Explain the parity bit method used for error detection. Suppose a bit sequence 100110011 is received. Assume odd parity bit method is used, find whether it has been received correctly or not. | 8 |
| | (f) How are the number of twists in the UTP cable related to its performance ? | 5 |

2. (a) Compare and contrast between Amplitude and phase modulation techniques. Discuss the limitations of each. 10
- (b) Assume a 10 bit sequence is 101110110 and a divisor (polynomial) is 1101. Calculate the CRC. 10
- Note :- show all steps and calculation.
3. (a) Explain the importance of Time Division Multiplexing (TDM). What are the application of TDM ? Also, write its disadvantages (if any). 10
- (b) Discuss the ATM service classes and QoS (Quality of Service) parameters of each class. 10
4. (a) Differentiate between IPv4 and IPv6. Also, discuss the need of IP v6. 10
- (b) Write the drawbacks of transparent fragmentation. Also, discuss Non - transparent fragmentation method. 10
5. Write short notes on the following : 20
- (a) IEEE 802.3
- (b) RSA
- (c) 3G
- (d) CDMA
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