

Roll No.

BCA-503(N)

B. C. A. (Fifth Semester) EXAMINATION, Dec., 2013

(New Course)

Paper Third

COMPUTER NETWORK

Time : Three Hours]

[Maximum Marks : 75

Note : Section A is compulsory. Attempt any *seven* questions from Section B and any *one* question from Section C.

Section – A

(Numerical/Analytical/Problematic Questions)

1. Fill in the blanks : 6
- (i) networks consist of many connections between individual pairs of machines.
 - (ii) service is modeled after the telephone system.
 - (iii) The oldest and still most common transmission medium is
 - (iv) Transport layer does not guarantee delivery of
 - (v) is the number of bits transmitted or sent in one second.
 - (vi) of wires will reduce the effect of external interface.

2. True/False : 6
- Crosstalk basically means interference between the adjacent telephone channels.
 - MAN is a bigger version of a LAN.
 - Broadcast networks cannot be divided into dynamic allocation.
 - The transmission medium decides the highest value of bit rate.
 - The transport layer is not responsible for segmentation.
 - The redundancy checking techniques is based on binary multiplication.
3. Define the following : 6
- Congestion in network layer.
 - Gateways.
 - Link access procedures.

Section - B

6 each

(Short Answer Type Questions)

- Explain OSI model in detail.
- Define all types of network topology with advantages and disadvantages.
- Calculate the maximum bit rate for a channel having bandwidth 3000 Hz and S/N ratio of 30 dB.
- Explain the types of transmission impairments.
- Write advantages and disadvantages of all switching techniques.
- Write the differences between WDM, TDM and FDM.

- Explain congestion control algorithm.
- Write design issues of network layers.
- Given a 10 bit sequence frame : 1011101101 and a divisor (polynomial) of 1101. Find the CRC.
- Write the name and explain network connecting devices.

Section - C

(Long Answer Type Questions)

- Discuss different types of transmission media in detail. 10
- Write the functions of session layers. 5
- Write the functions of presentation layer. 5
- Write the name and explain techniques for achieving good QOS. 10