Roll No. ....

B.C.A. (III)
1733

Compt. Netw.

B.C.A. (Part-III) EXAMINATION, 2018
PAPER-III
BCA: 303- COMPUTER NETWORKS

Time Allowed - Three Hours
Maximum Marks - 80

नोट :– (1) प्रश्न संख्या 1 अनिवार्य है। शेष प्रश्नों में से किन्हीं चार को हल कीजिये।

(2) सभी प्रश्नों के अंक समान है।

Note :- (1) Question No. 1 is compulsory. Attempt any FOUR questions from the remaining questions.

(2) All questions carry equal marks.

1. (a) What is the need of amplitude modulation? Write down and general principles of frequency modulation.

(b) Write down the characteristics of local area networks and wide area Networks.

2. (a) How can we set-up a local area network with 20 computers and one server. List out the necessary network interconnecting devices with number of ports and cable types used for connections. How can we connect the LAN systems with Internet ?

(b) What do you mean by a network protocols. List out the main protocols used LAN, WAN and MAN.

3. (a) Write down the functions of Physical layer, the data link layer and Network layer. What are two reasons for using layered protocols ?

(b) Compare the packet switching and circuit switching. Draw the suitable diagram showing the timing of events showing the timing of events in both methods.

4. (a) Compare the serial communication standards and parallel communication interfacing.

(b) What is baseband transmission ? Explain the NRZ (Non-Return-to-zero) and NRZI (Non-Return-to-zero Invert) coding with example. Define bit rate and band rate.

5. (a) Compare the frequency division multiplexing and time division multiplexing.

(b) What is pulse code modulation ? Compare the data rates and Bandwidth of twisted pair cable and optical fiber transmission media.

6. (a) What do you mean by byte stuffing and bit stuffing? Explain the hamming codes and parity check codes with example.

(b) What do you mean by cyclic Redundancy check ? Write down the algorithem for computing the cyclia Redundancy check.

7. (a) Write down the difference between physical LAN Topologies and Logical Topologies. Compare the Ring and stare LAN Topologies.

(b) Compare the pure ALOHA and Slotted ALOHA with suitable diagram.

8. Write short notes on any four :-
(a) IBM SNA network architecture
(b) Signal Formats used in LAN
(c) Double error detection and correction codes.
(d) Token Ring and Token Bus.
(e) Network reliability and Security.