

Roll No.

BCA-503(N)

B. C. A. (Fifth Semester) EXAMINATION, Dec., 2019

(New Course)

Paper Third

COMPUTER NETWORK

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

(Short Answer Type Questions)

Note : All questions are compulsory. Each question carries 3 marks.

1. (A) Write minimum five comparison of TCP/IP and ISO/OSI model.
- (B) What is the difference between packet switching and circuit switching ?
- (C) Discuss the different physical layer transmission media.

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- (D) What do you understand by Network Topology ? Differentiate network topologies used in LAN.
- (E) What is UDP ? What is the maximum size of a UDP datagram ?
- (F) What is the difference between an active web document and dynamic web page ?
- (G) Write *three* characteristics of data link layer.
- (H) What is SMTP ? Explain its various components with suitable example.
- (I) What is the difference between B-ISDN and N-ISDN ?

Section—B

(Long Answer Type Questions)

Note : Attempt any *two* questions. Each question carries 12 marks.

- 2. What is MIME ? Explain standard content-types of MIME in detail.
- 3. How can we detect the errors in networks ? Define single bit and multiple bit errors in computer networks.
- 4. Describe the following :
 - (i) Repeater and Gateway
 - (ii) Hub and Switches
- 5. What are the different elements of transport protocol ? Also explain, how do we establish a connection.

Section—C

(Long Answer Type Questions)

Note : Attempt any *two* questions. Each question carries 12 marks.

- 6. Write at least *three* functions of each layer of ISO/OSI model.

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- 7. Write at least *two* routing algorithms and also explain in detail.
- 8. Compare two data link layer protocols. Go Back N and selective repeat in terms of flow control, error recovery and packet loss.
- 9. What do you understand by congestion control ? Also explain the techniques to improve the quality of service.

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