

(i) Printed Pages: 2

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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Bachelor of Computer Applications 5th Semester
(2125)

COMPUTER NETWORKS

Paper : BCA-16-501

Time Allowed : Three Hours]

[Maximum Marks : 65

Note :— Attempt five questions in all, selecting **ONE** question each from Section–I to Section–IV and compulsory question.

SECTION—I

1. Explain the layers of the OSI Model in detail. Write the comparison of OSI model and TCP/IP model. 13
2. What do you mean by Transmission Media? Explain guided and unguided transmission media in detail. 13

SECTION—II

3. What are the various error detection and correction codes? Explain checksum, CRC and Hamming code in detail. 13
4. Explain data link protocols for noiseless and noisy channel in detail. 13

SECTION—III

5. What is congestion control in computer network? Discuss the key principles of congestion control. Discuss the working of Leaky bucket and Token bucket algorithms. 13
6. Write short note on the following :
- (a) Shortest Path Routing
 - (b) Broadcast and Multicast Routing 6,7

SECTION—IV

7. (a) Explain the architecture and services of e-mail. Write a note on MIME. 7
- (b) Explain Simple Mail Transfer Protocol (SMTP) in detail. 6
8. What is Domain Name System (DNS)? Explain the purpose and functioning of DNS. Also explain DNS Name space and DNS servers in detail. 13

(Compulsory Question)

9. (a) Explain Bus and Star topology. 3
- (b) What is the role of MODEM? 3
- (c) Explain IPv4 address classes. 3
- (d) Write a short note on HTTP and FTP. 4