(i) **Printed Pages : 2**   Roll No. ....

(ii) **Questions   : 9**   **Sub. Code :** `0` `9` `4` `7`

                          Exam. Code : `0` `0` `3` `1`

Bachelor of Computer Applications 5th Semester

(replace above)

Bachelor of Computer Applications 5th Semester
(1129)

COMPUTER NETWORKS
Paper—BCA–16–501

Time Allowed : Three Hours]   **[Maximum Marks : 65**

Note :— Attempt **one** question each from Sections A, B, C and D.
Section E is compulsory.

SECTION—A

1. (a) Explain the features of LAN, MAN and WAN.   7

    (b) Draw and describe various layers of TCP/IP model. How
         is it different from OSI reference model ?   6

2. (a) What is the meaning of unguided transmission media and its
         benefits over guided media ? Explain the working of microwave
         transmission.   7

    (b) What is multiplexing in computer networks ? Explain and
         differentiate between FDM and WDM in brief.   6

SECTION—B

3. (a) What are the design issues of Data Link Layer ?   7

    (b) What is an error in Computer Networks ? Explain CRC
         technique with the help of suitable example.   6

4. (a) What are the various assumptions of static channel allocation ? 4

(b) What are the Sliding Windows Protocols ? Explain Go-Back-N and Selective-Repeat Sliding Windows Protocols along with their advantages and disadvantages. 9

SECTION—C

5. (a) What are the various design issues of Network Layer ? 9

(b) What do you understand by Subnetting ? 4

6. (a) What is congestion ? What are the factors that lead to congestion in a network ? Explain the principles of congestion control. 6

(b) Explain broadcast and multicast routing. 7

SECTION—D

7. (a) Explain DNS and DNS servers. 6

(b) Explain terms HTTP and Network Security. 7

8. (a) Write short notes on the following terms :

(i) World Wide Web

(ii) File Transfer Protocol. $3 \times 2 = 6$

(b) Explain the architecture and services of an E-mail System. 7

SECTION—E

9. Attempt **all** questions :

(a) Define modulation. 2

(b) What is IEEE 802.3 ? 2

(c) What is an IP address ? 2

(d) What are the light emitting sources used in Fiber Optics ? 2

(e) What are the limitations of SMTP ? 2

(f) What are the advantages of flooding ? 3