

Total No. of printed pages = 7

END SEMESTER EXAMINATION, NOVEMBER-2018

Semester – 5th

Subject Code : Co-504

**COMPUTER COMMUNICATION AND
NETWORKING**

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Instructions :

1. All questions of PART-A are compulsory.
2. Answer any *five* questions from PART-B.

PART – A

Marks – 25

1. Fill in the blanks :

1 × 10 = 10

(a) A _____ is a computer that stores the network programs and shared data files that users can get access to.

(b) A _____ is a component used to transfer data in terms of signal in the network.

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- (c) A _____ is a networking device that forwards data packets between computer network.
- (d) A _____ is the third upper layer of the OSI reference model.
- (e) The set of rules that a computer must follow on a network is called a _____.
- (f) Coaxial consists of _____ concentric copper conductors.
- (g) The numbers of layers in the internet protocol stack is _____.
- (h) A _____ is the unique, identifying number for piece of hardware within a network.
- (i) A service is specified by a set of _____ available to a user to process to access the service.
- (j) The _____ contains information about various routes between devices in order to present the most efficient paths for data packets.

2. Write true or false :

1×10=10

- (a) One service which the Session layer provides is the management of dialogue control.
- (b) An internet protocol address (IP address) is a numerical label assigned to each device connected to a computer network.
- (c) The exchanging unit of physical layer is frame.
- (d) Fibre optic or optical fibre is the unguided transmission media.
- (e) Slotted Aloha do not improve the performance of system over pure aloha.
- (f) A communication satellite is an artificial that relays and amplifies radio waves signals via a transponder.
- (g) A web browser is a hardware accessing information on the world wide web.
- (h) The protocols used to determine who goes next on a multi-access channel to a sublayer of the data link.

(i) IMAP and POP3 are the two most commonly used internet mail protocols for retrieving emails.

(j) Client server architecture is a computer network application.

3. Choose the correct answer : $1 \times 5 = 5$

(a) Which one of the following is not a function of network layer ?

(i) Inter-networking

(ii) Routing

(iii) Congestion control

(iv) None of the above

(b) In virtual circuit network each packet contains :

(i) Full source and destination address

(ii) A short VC number

(iii) Only source address

(iv) Only destination address

(c) The network layer concerns :

(i) Bits

(ii) Packets

(iii) Frames

(iv) None of the mentioned

(d) Two broad categories of congestion control are :

(i) Open-loop and closed-loop

(ii) Open-control and closed-control

(iii) Active control and passive control

(iv) None of the mentioned

(e) Radio channels are attractive medium because

(i) Can penetrate walls

(ii) Can carry signal from long distance

(iii) Connectivity can be given to mobile user

(iv) All of the above

PART - B

Marks - 45

4. (i) Compare OSI and TCP/IP reference model.
(ii) What are the connection oriented and connectionless service ?
(iii) Write about the computer network applications. $3 \times 3 = 9$
5. (i) Explain about Fibre optic cable.
(ii) What is communication satellite ?
(iii) Compare radiowave and microwave. $3 \times 3 = 9$
6. (i) What are the design issues of data link layer ?
(ii) Write about sliding window protocol.
(iii) What are error detection and correction in computer network ? $3 \times 3 = 9$

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(6)

7. (i) What is medium access sublayer ?
(ii) Write the difference between Pure Aloha and Slotted Aloha.

(iii) What do you mean by carrier sense and no carrier sense ? $3 \times 3 = 9$

8. (i) What do you mean by routing, routing table and routing algorithm ? 6

(ii) What do you mean by congestion in communication ? 3

9. (i) What are the functions of session layer ?

(ii) What are the different IP addressing ?

(iii) What is an electronic mail ? $3 \times 3 = 9$

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(7)

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