



2018 VI 12

1430

Seat No. :

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Time : 2 Hours

COMPUTER ORGANIZATION AND OPERATING SYSTEM

Subject Code

V	3	1	5
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Total No. of Questions : 5

(Printed Pages : 3)

Maximum Marks : 50

- INSTRUCTIONS:**
- All questions are **compulsory**.*
 - Figures to the **right** indicate **full** marks.*
 - Write the number of question and sub-question **clearly**.*
 - Draw diagrams **wherever** necessary.*
 - Answer to every question shall **start on a fresh page**.*

1. A) Answer the following in **one** word : **[2×1=2]**
- Name the physical topology in which all the nodes are connected to a central multiport switch.
 - Name the data communication system spanning states, countries or the whole world.
- B) Answer the following : **[2×2=4]**
- Explain CSMA/CD (carrier sense multiple access/collision detection) in three to four lines.
 - What is a Computer Network ? State one point of difference between Private Network and Public Network.
- C) Answer the following : **[1×4=4]**
- With a neat labelled diagram, describe Ring topology.
- OR
- With a neat labelled diagram, describe Linear Bus topology.



2. A) Answer the following in **one** word : **[2×1=2]**

- i) Name the network printing software that holds a print job until it can be processed by the Printer.
- ii) Name a computer or device that access services made available by a server on a network.

B) Answer the following : **[2×2=4]**

- i) Explain Non-dedicated servers in three to four lines.
- ii) Describe EDI standard in three to four lines.

C) Answer the following : **[1×4=4]**

- i) What is the use of web server with respect to internet ? Explain in six to seven lines.

OR

- ii) What is the purpose of maintaining mail server on the network ? Explain in six to seven lines.

3. A) Answer the following in **one** word : **[2×1=2]**

- i) Which category of cable transmit only one type of signal that uses the entire bandwidth of the cable ?
- ii) Name the cable that transmit signals in the form of light rather than electric current.

B) Answer the following : **[2×2=4]**

- i) Write in three to four lines, the use of a Router on any computer network.
- ii) What is a repeater ? Why are they required in a network ?

C) Answer the following : **[1×4=4]**

- i) Illustrate with neat labeled diagram, the physical construction of fiber optic cable.

OR

- ii) Elaborate with a neat labeled diagram, the Coaxial cable.



4. A) Answer the following in **one** word : [2×1=2]
- i) Name the layer responsible for logical addressing and path determination or routing between logical address.
 - ii) Name the protocol that allows two computers to communicate together through a secure channel.
- B) Answer the following : [2×2=4]
- i) Explain IP address in three to four lines.
 - ii) What is File Transfer Protocol ? State the basic steps to use FTP server.
- C) Answer the following : [1×4=4]
- i) Explain the Session layer of OSI model along with its functions.
- OR
- ii) Briefly explain the Data Link layer of OSI model in six to seven lines.
5. A) Answer the following in **one** word : [2×1=2]
- i) Name the firewall technique which helps to hide the address of the true network and intercepts all messages entering and leaving the network.
 - ii) Which command is used to count the number of characters in a file ?
- B) Answer the following : [2×2=4]
- i) What is Physical Security ? State the three main components of physical security.
 - ii) Explain the “Strong User Authentication” as one of the methods to secure the data on a computer network.
- C) Answer the following : [1×4=4]
- i) Write a shell script that receive two files names as arguments, it should determine whether the contents of the two files are same or not. If they are same then the second file should be deleted.
- OR
- ii) Write a shell script to input a sentence and count the number of vowels in the given input sentence.
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