



2018 III 15

1000

Seat No. :

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Time : 2 Hours

**COMPUTER ORGANIZATION AND OPERATING SYSTEM
(New Pattern)**

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 **each** question and sub-question **clearly**.
 - Draw **neat** diagrams **wherever** necessary.
 - Answer to every question shall start on a **fresh** page.

- A) Answer the following in **one** word **each** : **(2×1=2)**
 - Name the signal that is continuous wave form and changes smoothly over time.
 - Name the transmission mode that supports two way data transmission but only in one direction at a time.

B) Answer the following : **(2×2=4)**

 - What is computer network ? Give two characteristics of computer network.
 - Explain in three to four lines Metropolitan Area Network.

C) Answer the following : **(1×4=4)**

 - What is physical topology ? Describe tree topology with labelled diagram.

OR

 - What is logical topology ? Explain in 4-5 lines working of Token Ring topology.
- A) Answer the following in **one** word **each** : **(2×1=2)**
 - Name the print software that manages sending of jobs to the printer when an application prints a document.
 - Name the term used for a group of users who shares files and resources on the network.



B) Answer the following : (2×2=4)

- i) What are dedicated servers ? Explain in 3-4 lines.
- ii) Briefly explain any two ways in which intranet supports collaborative process.

C) Answer the following : (1×4=4)

- i) What is the purpose of maintaining a web server on the network ? Explain in 6-7 lines.

OR

- ii) What is Electronic Data Interchange ? Briefly explain two components of EDI.

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

- i) Name the connector used to connect a node using coaxial cable on the network.
- ii) Name the networking device that plugs multiple data cables to enable communication between different network devices.

B) Answer the following : (2×2=4)

- i) Write two differences between baseband and broadband transmission cables.
- ii) Explain the use of Network Interface Card on the network in three to four lines.

C) Answer the following : (1×4=4)

- i) Illustrate with neat labelled diagram Twisted pair cable.

OR

- ii) Illustrate with neat labelled diagram Fiber optic cable.

4. A) Answer the following in **one word each** : (2×1=2)

- i) Name the OSI layer that directly serves the end user.
- ii) Name the protocol that allows computers to connect together through a secure channel using data encryption.



B) Answer the following : (2×2=4)

- i) Write two advantages of TCP/IP.
- ii) How is IPV6 different from IPV4 ?

C) Answer the following : (1×4=4)

- i) Explain in 6-7 lines the responsibilities of Presentation layer.

OR

- ii) Explain in 6-7 lines the responsibilities of Transport layer.

5. A) Answer the following in **one** word **each** : (2×1=2)

- i) Name the data security mechanism where mathematical schemes and algorithms are used to scramble data into unreadable text.
- ii) Give the Linux command to evaluate mathematical expression.

B) Answer the following : (2×2=4)

- i) What is data security ? State the different methods of data security.
- ii) What is firewall ? How does packet filter firewall technique works ?

C) Answer the following : (1×4=4)

- i) Write the shell script in Linux that reads an integer and checks if it is a prime number.

OR

- ii) Write the shell script in Linux that reads two filenames, check if both files exists and their content is same. If the content is same then delete the second file.
