

**TILAK MAHARASHTRA VIDYAPEETH, PUNE**  
**BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)**  
**SPECIALIZATION IN CYBER SECURITY (CS)/**  
**BACHELOR OF SCIENCE (CYBER SECURITY)/**  
**BACHELOR OF SCIENCE**  
**EXAMINATION : JUNE - 2025**  
**SEMESTER - I**

**Sub: Computer Fundamentals Networking/Computer & Network Fundamentals**  
**(BCA140-18/BCA140-20/BCA23-103/BSC24-103/BCA-CS140-20/BCAC23-103/BSCC24-103)**

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**Date : 13/06/2025**

**Total Marks : 60**

**Time: 10.00am To 12.30pm**

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**Instructions:**

1. All questions are compulsory unless and otherwise stated.
  2. Bold figures to the right of every question are the maximum marks for that question.
  3. Candidates are advised to attempt questions in order.
  4. Answers written illegibly are likely to be marked zero.
  5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
  6. Draw neat and labelled diagrams wherever necessary.
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**Q.1. Fill in the blanks.**

**(5)**

1. IPv4 is \_\_\_\_\_ bit address
  - a) 64
  - b) 128
  - c) 96
  - d) 32
2. \_\_\_\_\_ connect two different LAN's
  - a) router
  - b) switch
  - c) hub
  - d) modem
3. HTTP protocol is used to access \_\_\_\_\_.
  - a) Website
  - b) FTP server
  - c) Email Service
  - d) File Server
4. \_\_\_\_\_ is a primary memory
  - a) ROM
  - b) Cache
  - c) RAM
  - d) external
5. Picture and sound together is an example for \_\_\_\_\_.
  - a) Input device
  - b) Output device
  - c) scanner
  - d) None of these

**Q.2. State True/False.**

**(5)**

1. A computer network between Seattle and Philadelphia is made possible through a LAN
2. Peer to Peer networks are easy to configure
3. Binary value of 303 is **0011000011**
4. Monitor is an Input device.
5. An Administrator is not required for Client Server networks

**Q.3. Answer the following. (Solve any 5) (10)**

1. Define router
2. Give difference between TCP and UDP.
3. What is half duplex communication?
4. What are the various criteria necessary for an effective and efficient network?
5. Give the uses of the Internet
6. What is Wi-Fi network?

**Q. 4. Answer the following in detail. (Solve any 6) (30)**

1. Explain OR & AND gates using truth table
2. Explain OSI reference model.
3. Convert the given following
  - a)  $(4117)_{10} = (?)_2$
  - b)  $(1334)_8 = (?)_{10}$
4. Write an algorithm and draw flowchart to calculate simple interest.
5. Explain client and server in Client-Server Networking.
6. Explain the classes of IP addresses.
7. Explain any 2 output devices.

**Q. 5. Answer the following in detail. (Solve any 1) (10)**

1. Explain the topologies of the network.
  2. Explain in detail about storage devices
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