

Half-Yearly Examination - 2024**Class - X****COMPUTER SCIENCE (THEORY)****Full Marks - 70****Time : 3 Hours****Pass Marks : 21**

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

1. Choose the correct answer :

1x5=5

(a) Which device is required to connect multiple heterogeneous networks ?

(i) Hub (ii) Switch (iii) Router (iv) Access Point

(b) How many bytes are reserved for OUI in a MAC address ?

(i) 3 (ii) 8 (iii) 24 (iv) 12

(c) Array elements are stored in _____.

(i) Scattered memory locations

(ii) Sequential memory locations

(iii) Both (a) and (b) (d) None of them

(d) The objects of an array is called as

(i) Elements of an array (ii) Index of an array

(iii) Size of an array (iv) list of an array

(e) What are the Types of Arrays ?

(i) int, long, float, double (ii) struct, enum

(iii) char (iv) All of these

2. Fill in the blanks :

1x5=5

(a) An access point is used to connect _____.

P.T.O

(b) The ping command is used to _____.

(c) _____ is a set of computers and other units that are connected with each other.

(d) PAN stands for _____.

(e) Bluetooth, Wi-Fi, WiMAX, etc, are some examples of _____ technology.

3. State whether the following statements are True or False. $b5=5$

(a) If the condition of the while loop is false, the control comes to the second statement inside the loop. T

(b) We can use at most three loop in a single C program. f

(c) The statements inside the do while loop executes at least once even if the condition is false.

(d) In do while loop, the condition is written at the end of the loop. f

(e) Only the first statement inside the do while loop executes when the condition is false.

4. Answer the following questions in one word : $1 \times 8 = 8$

(a) It is a name of computer or any connected device in a computer network.

(b) It is a set of well established rules that determine how two computers communicate or transfer data between them. What is called ? <https://www.assamboard.com>

(c) What are the four types of computer Network?

(d) Which Networks are normally spread over entire city or a wide geographic location ?

(e) What are the two types of IP Address ?

(f) What are the three types of loop constructs in C programming ?

- (g) What is the loop inside another loop called?
- (h) What is data item of an array typically called?

5. Answer the following questions :

2x10=20

- (a) What is Hub?
- (b) Give two example of wired technology?
- (c) What is PAN?
- (d) What is hostname?
- (e) How are the IPv4 addresses represented?
- (f) What is Router?
- (g) What is the meaning of encryption?
- (h) What is a global variable in C ? Why do we need such a variable? <https://www.assamboard.com>
- (i) What is access point?
- (j) What is the purpose of Arp command ?

6. Answer the following questions :

3x3=9

- (a) What is the main function of the access point?
- (b) What is the difference between POP and SMTP?
- (c) What is a nested loop?

7. Answer the following questions :

4x4=16

- (a) What is the difference between LAN and PAN?
- (b) What is the procedure to assign an IP address to a Computer?
- (c) Write the difference between HTTP and FTP Protocol?
- (d) Why do we use a loop in a C Program?

P.T.O.

8. Write a C Program to display the following pattern.
(Any one) 1x2=2

(i) 54321

5432

543

54

5

Or

1

11

111

1111

11111

--- 000 ---