P.V.G.'s

Muktangan English School & Jr. College, Pune - 09

Terminal Exam (2024-25)

STD 11th

Subject: Computer Science(Paper 1) **Marks: 50**

Date: 18/10/2024 **Time: 9 am to 11.30 am**

Q 1) A) Select the correct alternatives and rewrite the sentence. **(4 M)**

1. _____ is a pictorial representation of logic of program.
   a) Algorithm c) Flowchart
   b) Chart d) pseudocode
2. Writing the program logic in simple sequence and in simple English language is known as_____.
   a) Chart c) Program
   b) Algorithm d) None of above
3. The decimal equivalent of a hexadecimal number 2 A is_____.
   a) 42 c) 82
   b) 62 d) 17
4. The Radix of Hexadecimal number system is_____.
   a) 8 c) 16
   b) 2 d) 10

B) Answer any two of the following. **(6 M)**

1. What are the Characteristics of Algorithm?
2. What are the different steps of Process of Program Development, explain all in brief.
3. Explain the following terms:
   a) Radix
   b) 1's Complement (with example)

Q 2) A) Answer any two of the following: **(6 M)**

1. What is difference between modular programming and structural programming.
2. Convert the following Hex to Octal.
   a) 2F7 b) BAB
3. Explain 2's complement subtraction with suitable example.

B) Answer any one of the following: **(4 M)**

1. Which are the Problem Analysis Tools? Explain any two in brief.
2. Define Flowchart .and Draw and write the use of all symbols of flowchart.

Q 3) A) Answer any two of the following: **(6 M)**

1. Perform the following Binary Arithmetic:
   a) 23+25
   b) 111101+110011
2. Convert the following decimal number in binary.
   a) 25.5
   b) 10.625
3. What is Binary searching? Write Binary search Algorithm.

B) Answer any one of the following: **(4 M)**

1. a) $(1101*111)_2=(?)_{10}$ b) $(9*7)_{10}=(?)_2$
2. Explain following terms:
   a) Pseudo code
   b) Sorting

Q 4) A) Answer any two of the following: **(6 M)**

1. What is Sorting. State various algorithms used for it. Write Bubble Sort algorithm.
2. Convert the following :
   a) $(100)_{10}=(\ ?\ )_{16}$
   b) $(91)_{10}=(\ ?\ )_2$
3. Convert following Octal numbers in to binary.
   a) 736
   b) 116.54

B) Answer any one of the following: **(4 M)**

1. Convert the following Hexadecimal Numbers in Binary Numbers.
   a) $(3A5E)_{16}=(?)_2$ b) $(C9F.2A)_{16}=(?)_2$
2. Write any 4 Advantages of Flowchart.

Q 5) A) Answer any two of the following: **(10 M)**

1. Draw Flowchart to find largest number from given two numbers.
2. Draw Flowchart to find square of given number.
3. Define Pseudo code with it's advantages and limitations.

OR

Q 5) B) Answer any two of the following: **(10 M)**

1. Write Linear search Algorithm.
2. Solve following:
   a) $(101*110)_2=(?)_{10}$
   b) $(1100\div10)_2=(?)_{10}$
3. Define Hexadecimal , Decimal and Octal number system with their Radix.