March 2014

SEAT NUMBER | | | | | | |

X	17	2014	1030	V-234	(E)

COMPUTER SCIENCE
PAPER - I (D-9)

Time : 3 Hours | **4 Pages** | **Max. Marks : 50**

Instructions **(1)** All questions are compulsory.
(2) Figures to the right indicate full narks.
(3) Use of calculator is not allowed.
(4) Draw neat diagrams wherever necessary.

1 (A) Select correct alternative and rewrite the following :

(a) _____ is a free software. 1
(i) UNIX (ii) DOS (iii) LINUX (iv) WINDOWS

(b) Finding location of given element in array is called _____ 1
(i) Sorting (ii) Searching (iii) Traversing (iv) Merging

(c) In C++ _____ is an extraction operator. 1
(i) « (ii) >> (iii) && (iv) !

d) In HTML _____ is not a paired tag. 1
(i) <B> (ii) <I> (iii)
 (iv) <TABLE>

(B) Answer any two of the following :

(a) What is Call by Reference ? Explain with suitable example. 3
(b) Explain the following tag of HTML with example : 3
(i) <PRE> (ii) <OL> (iii) <MARQUEE>
(c) What is Linked List ? Explain with suitable example. 3

2. (A) Answer any two of the following :

(a) Give the features of LINUX Operating System. 3
(b) What are the basic services provided by Operating System ? 3
(c) With suitable explain local and global variable in C++. 3

(B) Answer any one of the following :

(a) Write an algorithm to sort the elements of array using Bubble Sort Method. 4
(b) What is Polymorphism ? Give and define their types with example. 4

3. (A) Answer any two of the following

(a) Define the following term of Data Structure : 3
(i) Field (ii) Record (iii) File
(b) Draw the Binary Tree for following expression : E = ((a — b) + (b — c)) / e 3
(c) What is Constructor ? Give its syntax and two rules to define Constructor. 3

(B) Answer any one of the following :

(a) Explain the following term in regard of Virtual Memory : 4
(i)Page Fault (ii) Working Set (iii) Demand Paging (iv) Dirty Bit

(b) Give the basic structure of HTML Program. 4
State its any two advantages and disadvantages.

4. (A) Answer any two of the following :

(a) Explain Contiguous Allocation Method in Information Management. 3
Give any two advantages of it.

(b) Explain the following control structure and their types use in Data Structure : 3
(i) Selection (ii) Loop

(c) What is Array ? How they are represented in Memory ? Explain with example. 3

(B) Answer any one of the following :

(a) List and explain the types of memory partitioning use in Memory Management of Operating System. 4

(b) What is Class ? Give the basic structure to define the class with example. 4

5. Answer any two of the following :

(a) Write a program in C++ to initialize the array of 10 integers and find the sum of all the elements of array. 5

(b) Write a program in C++ to accept a line from keyboard and count total no. of blank spaces in a line. The- program should print the original string and blank spaces. 5

(c) Write HTML Code to display following output :

SHIVAJI COLLEGE PUNE		
	XI	XII
Boys	15	20
Girls	20	15

OR

5. Answer any two of the following

(a) Write a program in C++ to accept three numbers from keyboard and find the smallest one and print it. 5

(b) Write a program in C++ to initialize the array of 10 floats and print all the array elements using pointer. 5

(c) Write a program in VBScript to print good morning or good evening or good afternoon using if ... else control and time( ) function. 5

Model Question Paper 2014

Instructions : (1) All questions are compulsory.
(2) Figures to the right indicate full marks.
(3) Use of any type of calculator is not allowed.
(4) Draw neat diagrams wherever necessary.
(5) Due credit will be given for the program with appropriate comments/remarks.

1. (A) Select the correct alternative and rewrite the following :

(a) Micro-controller 8050 has _____ bytes of RAM. 1
(i) 64 (ii) 128 (iii) 256 (iv) 32

(b) _____ flag is affected in CMA Instruction. 1
(i) All (ii) No (iii) Carry (iv) Zero

(c) Microprocessor T 8190 is a _____ bit Micro-processor. 1
(i) 4 (ii) 8 (iii) 12 (iv) 16

(d) _____ is a set of rules and formats for sending and receiving data in a network. 1
(i) Interface (ii) Frames (iii) Protocols (iv) Access Method

(B) Answer any two of the following :

(a) Explain function of 8085 Micro-processor Pins 3
(i) Reset out (ii) ALE (iii) TRAP

(b) Explain the following 8085 Instruction 3
(i) XTHL (ii) DAA

(c) Define Micro-controllers and state its advantages aver Micro-processor Based System. 3

2. (A) Answer any two of the following :

(a) Write a short note on Access Method and Token Passing Access Method. 4

(b) Explain Conditional and Unconditional RET instruction of Microprocessor 8085. 3

(c) Differentiate between UTP & STP Cable. 3

(B) Answer any one of the following

(a) Differentiate DAD and ADD Instruction of 8085 Microprocessor. 4

(b) Draw and explain programming model of 32 bit Version of x - 86 Family. 4

3. (A) Answer any two of the following

(a) State any three features and three applications ref 8051 Microcontroller. 3

(b) Define Addressing Mode of 8085 acid explain any two of them with example. 3

(c) Explain Concept of TCP/IP Protocol.

B) Answer any one of the following :

(a) What is Interrupt ? Differentiate between Hardware and Software Interrupt. 4

(b) Explain Memory Map of 8051 4

4. (A) Answer any two of the following :

(a) Differentiate between .PUSH and POP. 3

(b) If Accumulator Contains the Data 23H and B Register Contains 35H. What will be the Contents of Accumulator. After execution of each of the following instructions independently : (i) XRA (ii) ANI 0FH (iii) CPI 0A H 3

(c) Explain the following Wireless Media in detail :
(i) Microwave (ii) Infrared

(B) Answer any one of the following :

(a) Define Access Method. Explain Contention Access Method and Token Passing Access Method. 4

(b) Explain Modern and HUB in detail. 4

5. Attempt any two of the following :

(a) Write an Assembly Language Program to Count the Number of times that data 7EH is found in a block of memory location starting from 3000 H. Length of the block is storied in location 2FFFH. Store the result in location 2000H. 5

(b) Write a program in Assembly language that multiply two 8-bit numbers stored in memory location D000H and D001M. Store the two byte result in consecutive memory locations :starting from D002H. 5

(c) Write a program in Assembly Language that converts a hexadecimal number stored at CO30H to its BCD equivalent. ,Store the BCD result in CO31H onwards (AFH = 0175 BCD). 5

OR

5. Answer any two of the following :

(a) Write an Assembly Language Program that divides two one byte hex numbers where dividend is stored in memory location C000H and divisor is stored in memory location C001H. Store quotient and reminder in memory location C002H and C003H respectively. 5

(b) Write an ALP to calculate Sum of Series of Number. The length of the series is in memory location C100H and Series itself begins in memory location C101H. Assume Sum to be an 8-bit No. Store Result in C204H. 5

(c) Write an Assembly Language Program to find 2's Complement of five number stored from memory location CO30H and onwards. Store the result from memory location D000H. 5