

ANNUAL EXAMINATION : 2020-21

Class - XI

Subject - Computer Science

Time : 3 hrs. 15 Mins.

M.M. : 60

Note :-• First 15 minutes are allotted for the candidates to read the question paper.

- Answer all questions.

Q.1- Write the correct option from the options given below the following questions:- [6 × 1 = 6]

- a. Microprocessor is a collection of :
- Registers
 - ALU
 - Buses
 - All of these
- b. On the basis of size _____ is the smallest computer.
- Micro Computer
 - Mini Computer
 - Super Computer
 - None of these
- c. 2's complement of $(11001011)_2$ is _____.
- 01010111
 - 11010100
 - 00110101
 - None of these
- d. Which of the following is a non volatile storage?
- Secondary memory
 - Primary memory
 - Both (a) and (b)
 - None of these
- e. Full adder circuit is used to add how many bits?
- 6
 - 3
 - 4
 - None of these
- f. Which keyword is used to stop the execution of a loop?
- break
 - continue
 - return
 - None of these

Q.2- State true or false:- [4 × 1 = 4]

- The circuitry or pathway that carries data is known as bus.
- Norton Disk Doctor is an example of a virus.
- C++ has features of object oriented programming.
- 'else' clause in if else is optional.

Q.3- Answer the following questions briefly:- [5 × 2 = 10]

- a. Perform the following conversion :
- $(354)_8 = (?)_{10}$
 - $(593)_{10} = (?)_2$
- Write a short note on De Morgan's theorem.
 - What is the use of break and continue statements?
 - What is the significance of 2's complement?
 - Explain four features of C++ language.

Q.4- Answer the following questions:- [5 × 3 = 15]

- Explain universal gates with diagram.
- What are the main components of microprocessor?
- What is k map? Explain with the help of an example.
- What is the difference between interactive mode and script mode in Python?
- What are the advantages of computer network?

Q.5- Attempt the following questions:- (any five)

[5 × 5 = 25]

- a. Explain different types of topologies.
- b. Explain the process of binary subtraction using 2's complement with the help of an example.
- c. Explain different operators used in C++.
- d. What is CU? Explain its functioning.
- e. Discuss basic laws of boolean algebra briefly.
- f. What is looping statements? Discuss various types of looping statements used in C++.
- g. Write a program in python to obtain principal amount, rate of interest and time from user and compute simple interest.
- h. Write a program in C++ to print factorial of a number.

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