B.Sc. Semester I (Honours) Examination, 2018-19

COMPUTER SCIENCE

Course ID : 11514   **Course Code : SHCSC-103GE-1A(T)**

Course Title : Computer Fundamentals

Time: 1 Hour 15 Minutes   **Full Marks: 25**

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer *any five* questions from the following: 1×5=5

    (a) Write two functions of CPU.

    (b) What is hit ratio?

    (c) Write differences between system and application software.

    (d) What is radix?

    (e) What is cloud computing?

    (f) What do you mean by system bus?

    (g) Convert $(103 \cdot 25)_{10}$ to $(?)_8$.

    (h) Why operating system is called as "Resource manager"?

2. Answer *any two* questions from the following: 5×2=10

    (a) Subtract $(13 \cdot 25)_{10}$ from $(21 \cdot 50)_{10}$ using 2's complement method. Add $(101101 \cdot 1011)_2$ and $(110101 \cdot 1101)_2$.

    (b) Discuss different types of system software briefly.

    (c) Explain different CPU registers briefly.

    (d) Write short notes on OCR, Bar-Code Reader.

3. Answer *any one* question from the following: 10×1=10

    (a) Explain bus organization of a computer.

    (b) Draw and explain block diagram of a Computer.

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B.Sc. Semester I (Honours) Examination, 2018-19
COMPUTER SCIENCE

Course ID : 11514   **Course Code : SHCSC-103GE-1B(T)**

Course Title : Introduction to Programming

Time: 1 Hour 15 Minutes   **Full Marks: 25**

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer *any five* questions from the following: 1×5=5

   (a) What is algorithm?

   (b) What is function?

   (c) Write down the difference between while and do-while loop.

   (d) What is the use of `stdio.h`?

   (e) What is structure?

   (f) What are the characteristics of second generation computers?

   (g) What is pointer?

   (h) Write full form of ROM and ALU.

2. Answer *any two* questions from the following: 5×2=10

   (a) Draw the flow-chart to check whether a given number is prime or not?

   (b) Distinguish between call by value and call by reference. Write a C function to concatenate two strings.   2+3=5

   (c) Write short note on array and its use.

   (d) Write short note on Input and Output devices.

3. Answer *any one* question from the following: 10×1=10

   (a)   (i) Write a program in "C" to find the maximum of a given array of numbers.

         (ii) Write a program to find whether a given string is Palindrome or not.   5+5=10

   (b) Write a program in "C" to find the factorial of a number:

      (i) Using Recursion

      (ii) Without using Recursion.

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