Sep-21-00005

B. Tech. EXAMINATION, 2021

Semester I (CBCS)

COMPUTER FUNDAMENTALS AND

PROGRAMMING IN C++

CS-101

Time : 2 Hours   *Maximum Marks : 60*

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D. Q. No. **9** is compulsory.

Section A

1. Discuss in detail the evolution of computers.   **15**

2. Define Operating System. What is the need of an Operating System ? What are the functions of an Operating System ? Explain. **15**

Section B

3. Perform the following conversions as per directions :

(a) $1111_{10} = ?_8$ **4**

(b) $7442_8 = ?_2$ **4**

(c) $BABA_{16} = ?_{10}$ **4**

(d) $10101011_2 = ?_8$ **3**

4. Define and distinguish between RAM and ROM. **15**

Section C

5. Write short notes on the following :

(a) Identifier   **4**

(b) Keywords   **4**

(c) Constants   **4**

(d) Variables.   **3**

6. What are the different data types available in C++ ? Explain. **15**

Section D

7. Define Function. What are the methods of passing parameters in C++ ? Explain giving example. **15**

8. Write a program for finding factorial of a number using recursion. **15**

(Compulsory Question)

9. All questions are compulsory :   **1.5×10=15**

(a) Distinguish between analog and digital computers.

(b) Distinguish between translators and interpreter.

(c) Define cache memory.

(d) Distinguish between 16 bit and 32 bit computers.

(e) Distinguish between internal and external memory.

(f) Define type casting.

(g) What do you mean by default arguments ?

(h) Distinguish between local and global variables.

(i) How array is initialized at the time of declaration ?

(j) Define call by reference.