

18005(J)

**B. Tech 1st Semester Examination**

**Computer Fundamentals & Programming in C++ (CBS)**

CS-101

**Time : 3 Hours**

**Max. Marks : 60**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt one question each from sections A, B, C and D. Section E is compulsory. Write suitable comments wherever necessary. Assume data wherever necessary.

**SECTION - A**

1. (a) Explain in detail the classification of computer system. (6)  
(b) What is a computer system? Write down the functions of a computer system. (6)
2. (a) What do you understand by the language of a computer system? Differentiate between high level language and machine language. (6)  
(b) What are translators? Differentiate between compiler and interpreters. (6)

**SECTION - B**

3. (a) Convert  $(BAD)_{16}$  to  $(\quad)_2 = (\quad)_8 = (\quad)_7 = (\quad)_9$ . (8)  
(b) What is cache memory and where it is used in the system? (4)
4. (a) Explain all types of memories used in computer system. (8)  
(b) Explain BCD, ASCII and Clock speed. (4)

**SECTION - C**

5. (a) What do you understand by linking and loading? Explain. (6)  
(b) What are header files? What is the significance of using the header files. (3)  
(c) Differentiate between identifiers and keywords using suitable examples. (3)
6. (a) What do you understand by precedence of operators? Explain with the help of suitable example. (6)  
(b) What is type conversion? Why type conversion is necessary? (3)  
(c) Explain the logical operators used in C++ using suitable example. (3)

**SECTION - D**

7. (a) Write a C++ program to check whether a given number is prime or not. (6)  
(b) What are functions? Explain call by value and call by reference concept using as suitable example. (6)
8. (a) Write a C++ program to implement linear search. (6)  
(b) What are arrays? Write down the advantages of arrays. (6)

**SECTION - E**

9. (a) Define Assembler. (6)  
(b) What is internal and external storage. (6)  
(c) What are C++ tokens? (6)  
(d) What are built-in functions and user defined functions? (6)  
(e) Define function prototyping. (6)  
(f) How a two-dimensional array is declared? (6×2=12)