

**B.C.A(H)I<sup>st</sup> Semester Examination ,2021**  
**Subject: Computer Application**  
**Paper name: Introduction to C Programming**  
**Paper Code: BCA-102**

**Time: 3 Hrs**

**F.M: 80**

**1. Answer any six Questions: 6x5=30**

- (a) Show the difference between call by value and call by reference technique with an example. 5
- (b) Discuss the advantages and disadvantages of using an array. 5
- (c) Differentiate between structure and union with an example. 5
- (d) Write a program in C that determines highest integer of a given array. 5
- (e) Write a function in C to find out G.C.D of two integers. 5
- (f) Discuss advantages of switch statement over if-else statement with an example. 5
- (g) Explain dynamic memory allocation technique with a suitable example. 5
- (h) Write a short note on decision table. 5

**2. Answer any five Questions: 5x10=50**

- (a) What is recursion? Explain it with an example. Write a recursive function in C to reverse a string. 2+4+4
- (b) Differentiate between break and continue statements. Write a program in C to add two matrix. 3+7
- (c) What is pointer? Differentiate between malloc() and calloc(). Write a program using pointer to sort a set of numbers. 2+2+6
- (d) What do you mean by a file? Write a program in C that creates a file and then displays its content. 2+8
- (e) What is typecasting? Design a simple calculator using C. 2+8
- (f) What do you mean by pre processor directive? Draw a flow chart that converts a decimal number into its binary equivalent. 3+7
- (g) What is pseudo code? Write an algorithm that determines whether a given number is prime or not. 2+8