

B.C.A. (Part—I) Semester—II Examination**2ST2 : ADVANCED C**

Time : Three Hours]

[Maximum Marks : 60

Note :— (1) All questions are compulsory.

(2) Use suitable diagram wherever necessary.

1. (a) Explain with example how string can be handled using char array. 6
(b) Write the purpose, syntax and example of following functions :
(i) `strrev()`
(ii) `strset()`
(iii) `strcpy()` 6

OR

2. (a) Explain how string can be manipulated using arrays of pointers with suitable example. 6
(b) Write the purpose, syntax and example of following functions :
(i) `strcmp()`
(ii) `strcat()`
(iii) `strupr()` 6
3. (a) Explain the concept of local and global variable with suitable example. 6
(b) Using function recursion, write a program in C to evaluate factorial of n. 6

OR

4. (a) Explain function prototype, function definition and function calling by using an example of function that adds three numbers. 6
(b) Explain with syntax and suitable example :
(i) call by value
(ii) call by pointer. 6
5. (a) What do you mean by Union ? Explain with the help of suitable example. 6
(b) What is Pointer to Structure ? Explain with suitable example. 6

OR

6. (a) Compare union with structure using suitable example. 6
(b) Explain how structures are defined using suitable example. How are structure members accessed ? 6
7. (a) Explain `fread` and `fwrite` function with suitable example. 6
(b) Explain the following functions with example :
(i) `fgetc()`
(ii) `fputc()`
(iii) `fgets()` 6

OR

8. (a) Explain how to open and close file in C with suitable example. 6
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(b) Write a program to enter following data in a file :

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6

9. (a) Explain how memory can be allocated using malloc () in C with suitable example. 6

(b) Explain the following functions with suitable example :

(i) feof

(ii) ferror.

6

OR

10. (a) Explain line function in C. Write a graphics program to draw a triangle on screen using line function three times. 6

(b) Write a program that uses the functions ftell and fseek. 6