



## BRAINWARE UNIVERSITY

Course – BAMW

Computer Science (Basic C Programming) (BMW103)

(Semester – 1)

**Time allotted: 3 Hours**

**Full Marks : 70**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group –A

(Multiple Choice Type Questions)

10 x 1 = 10

1. *Choose the correct alternative from the following*
  - (i) Number of bytes required to store a float variable is
    - a. 8 bytes
    - b. 2 bytes
    - c. 4 bytes
    - d. 10 bytes
  - (ii) Which one of the following is a ternary operator?
    - a. &&
    - b. <=
    - c. !=
    - d. ? :
  - (iii) Pointer is
    - a. a variable containing the address of a variable
    - b. a value
    - c. a memory location
    - d. none of these.
  - (iv) Which one of the following declaration is invalid?
    - a. int 2A
    - b. int A2
    - c. int AA2
    - d. int A2A
  - (v) Do-While loop is called ..... in C language.
    - a. entry controlled loop
    - b. exit controlled loop
    - c. both (a) and (b)
    - d. none of these

- (vi) A string ends with
- |         |                                 |
|---------|---------------------------------|
| a. 0    | b. last character of the string |
| c. NULL | d. none of these                |
- (vii) Static memory allocation means allocation during..... time.
- |               |                  |
|---------------|------------------|
| a. run        | b. compile       |
| c. allocation | d. de-allocation |
- (viii) The mode used for creating a text file for read / write is :
- |        |       |
|--------|-------|
| a. rb+ | b. w+ |
| c. a+  | d. w  |
- (ix) ASCII value of 'A' is
- |       |       |
|-------|-------|
| a. 66 | b. 65 |
| c. 60 | d. 97 |
- (x) How many keywords are there in C language?
- |       |       |
|-------|-------|
| a. 30 | b. 32 |
| c. 42 | d. 40 |

### Group – B

(Short Answer Type Questions)

3 x 5 = 15

Answer any *three* from the following

2. Indicate the difference between `int main( )` and `void main( )`. [5]
3. Write a C program to print the following pattern :  

```

1
2 3
4 5 6
7 8 9 10

```

[5]
4. Write a comparative study between `for`, `while` and `do-while` loop. [5]
5. What do you mean by local variable and static variable? [5]
6. What is a macro? Write down the advantages & disadvantages of macro over function. [2+3]

**Group – C**

(Long Answer Type Questions)

3 x 15 = 45

Answer any *three* from the following

7. (a) What is a function? [2]  
 (b) What are the advantages of using functions? [3]  
 (c) What are the function prototypes? [3]  
 (d) Explain the difference between call by value and call by reference with examples. [7]
8. (a) What do you mean by different storage classes in 'C'? [2]  
 (b) Name different storage classes and explain each with examples. [8]  
 (c) Write a program in C to sort n numbers of integers using bubble sort. [5]
9. (a) What is union? [2]  
 (b) How does a union differ from a structure? [4]  
 (c) How a union member can be accessed? [2]  
 (d) Write a 'C' program that implements a structure 'person' that would contain person name, date\_of\_joining & salary. [7]
10. (a) What do you mean by recursion? [2]  
 (b) What is indirect recursion? [2]  
 (c) Write a program in C to find the factorial of a number using recursion. [6]  
 (d) Write a program to find length of a string without using a library function. [5]
11. Write short notes on any *three* of the following : [3 x 5]  
 (a) Actual and formal arguments  
 (b) Dynamic memory allocation  
 (c) Preprocessor directives  
 (d) Break and exit  
 (e) Ternary Operator