



**BRAINWARE UNIVERSITY**

**Term End Examination 2018 – 19**

**Programme –Bachelor of Science (Honours) in Computer Science**

**Course Name - Principle of Programming Language**

**Course Code - BCSC 201 / BCS 201**

(Semester – 2)

**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) Which will be the output?

```
void main ()
{
    int i=1;
    printf(“%d %d%d”, i,++i,i++);
}
```

a. 1 3 3

b. 3 2 2

c. 3 1 1

d. 3 3 1

(ii) Which one is the right output?

```
char a[ 50 ] = "computer" ;
printf(“%d”, strlen(a));
```

a. 9

b. 10

c. 4

d. 11

(iii) Which one is the right output ?

```
main()
{
    int i = 65;
    printf(“sizeof(i)=%d”,sizeof(i));
}
```

a. sizeof(i)= 1

b. sizeof(i)=2

c. sizeof(i)=4

d. sizeof(i)=8



**Group – B**

(Short Answer Type Questions)

3 x 5 = 15

Answer any *three* from the following

2. What is dynamic memory allocation ?What are the advantages of using linked lists over arrays ? [2+3]
3. Describe the different loop control structures in 'C' with syntax, example and explanation. [5]
4. Briefly describe the different loop control structures in 'C' with syntax, example and explanation. [5]
5. What are the advantages of using functions in 'C' programming ? What is the difference between users defined functions & library functions ? [2+3]
6. Define the term Dynamic Memory Allocation(DMA). What are the advantages of using DMA over arrays? [2+3]

**Group – C**

(Long Answer Type Questions)

3 x 15 = 45

Answer any *three* from the following

7. (a) Explain the difference between 'call by reference' and 'call by value'. [5]
- (b) What is the difference between global & local variable ? [8]
- (c) Write a recursive function for GCD calculation. [2]
8. (a) What is pointer? Explain with example that how the pointer is used for function calling using 'call by reference'. [2+3]
- (b) Define and differentiate between global & local variable with example? [8]
- (c) Write a recursive function for factorial of a number. [2]
9. (a) Is printf is a function? If yes,what does it return? [3]
- (b) What are the advantages of switch case ? [2]
- (c) Write a 'C' program to calculate factorial of a number. [10]
10. (a) What is union ? [2]
- (b) How does a union differ from a structure? [5]
- (c) How a union member accessed ? [3]

- (d) Write a 'C' program that implements a structure person that would contain person name, data\_of\_joining & salary. [5]
11. (a) What do you mean by different storage classes in 'C'? [5]
- (b) Explain different storage classes and each with examples. [5]
- (c) Write a 'C' function to implement the matrix multiplication using 2-D array. [5]

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