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Supplementary/Improvement Examination - 2023

Paper Name: Introduction to C - Programming

Paper Code: BCA-101 / BSC-101

Time: 2 Hours 30 Minutes

Maximum Marks: 60

Section – A

CO*: CO1, 2, 3, 4, 5 and BL*: L1, L2, L3, L4, L5

Note: Attempt ALL questions. Each question carries 1 mark.

1. The fourth generation computers are based on the microprocessor technology. (True / False)
2. System software acts as interface between application software and hardware. (True / False)
3. C is not a case sensitive language. (True / False)
4. Modularity is not a desirable program characteristic. (True / False)
5. Keyword cannot be used as identifier names. (True / False)
6. "typedef" is used for user-defined type declarations. (True / False)
7. The "exit" statement is used to exit from the loop but not program. (True / False)
8. "continue" keyword skip a part of the loop and transfer control to the beginning of the loop? (True / False)
9. An array can have more elements than the declared size of the array. (True/False)
10. C does not support any string data type. (True / False)

Note: Attempt ALL questions. Each question carries 1 mark.

1. C language is a
 - a) Machine Language.
 - b) Assembly Language.
 - c) High Level Language.
 - d) Low Level Language.
2. If x=5, y=3, z=7, then the statement s = x > y ? (x > z ? x : z) : (y > z ? y : z); will return:
 - a) 3
 - b) 0
 - c) 5
 - d) 7
3. Which of the following declaration is not supported by C language?
 - a) String str;
 - b) char *str;
 - c) float str = 3e2;
 - d) Both "String str;" and "float str = 3e2;"
4. What will be the output of the following program?

```
#include <stdio.h>
void reverse(int i);
int main()
{
    reverse(1);
}
```

```

void reverse(int i)
{
    if (i > 5)
        return;
    printf("%d ", i);
    return reverse((i++, i));
}

```

a) 1 2 3 4 5

b) Segmentation fault

c) Compilation error

d) Undefined behaviour

5. Comment on the following C statement.

```
n = 1; printf("%d, %d", 3*n, n++);
```

a) Output will be 3, 2

b) Output will be 3, 1

c) Output will be 6, 1

d) Output is compiler dependent

6. If a is a float variable, $a=9/2$; the statement `printf("%f", a);` will print a value on monitor:

a) 4.5

b) 4.000000

c) 4.500

d) 4.0

7. What are the elements present in the array of the following C code?

```
int array[5] = {5};
```

a) 5, 5, 5, 5, 5

b) 5, 0, 0, 0, 0

c) 5, (garbage), (garbage), (garbage), (garbage)

d) (garbage), (garbage), (garbage), (garbage), 5

8. What will be the output of the following code?

```
#include <stdio.h>
```

```
void main()
```

```
{
```

```
    int i = 1, j = 100;
```

```
    while (i <= 100 && j >= 1);
```

```
    {
```

```
        i++;
```

```
        j--;
```

```
    }
```

```
    printf("\n%d %d", i, j);
```

```
}
```

a) 100, 1

b) Syntax Error

c) Program does not terminate

d) 101, 0

9. How is an array initialized in C language?

a) `int a={1,2,3}`

b) `int a[3]={1,2,3};`

c) `int a(3)={1,2,3};`

d) `int a[] = new int[3];`

10. C does not support the concept of:

a) Structured Programming

b) Object Programming

c) Procedural Programming

d) Modular Programming

Section - B

Note: Attempt any FOUR questions. Each question carries 5 marks.

Q. No.	Questions	CO*	BL*
1.	What do you understand by structured programming? Explain in detail.	CO1	L1, L2
2.	Explain all the bitwise operators used in C with proper programming examples.	CO2	L1, L2, L3
3.	Write a program to calculate factorial of a given number.	CO2	L3, L6
4.	Differentiate between array and string and write a program to find the length of a given string.	CO4	L3, L5, L6
5.	Explain the concept of switch-case with examples.	CO3	L2, L3
6.	Explain the concept of call by reference and design a program to swap two numbers using call by reference.	CO4	L3, L5

SECTION-C

Note: Attempt any TWO questions. Each question carries 10 Marks.

Q. No.	Questions	CO*	BL*
1.	Write the pseudo code and draw the flow chart to find the largest number from given three numbers.	CO1	L1, L2
2.	Explain the user defined data type structure with syntax and suitable examples.	CO4	L3, L6
3.	What do you understand by recursive functions? Explain with one example.	CO4	L2, L3, L5
4.	Write the short note on following topics with proper examples: a) Storage Classes b) Local and Global variables	CO5	L2, L3

CO* - Course Outcomes from Syllabus, BL* - Bloom's Taxonomy Levels (1: Remembering, 2: Understanding, 3: Applying, 4: Analysing, 5: Evaluating, 6: Creating)

END