



MINOR EXAMINATION-2023

Course Code: CS/IT-101

Course Name: Principles of Computer Programming

Program & Sem: B.Tech (IMT/IMG/CSE/MSC/EEE), 1st Semester

Date: 27-09-2023 (Tue)

Time: 10:00 AM -12:00 PM

Max Marks: 30

Instructions:

- (i) Read the all questions carefully and answer accordingly.
- (ii) This Question paper contains fifteen questions.

Part A

Answer all the Questions.

**Each question carries one marks.
Marks)**

(10 Questions x 1 Mark = 10

Q.1. What is the output of this program?

(1 mark)

```
#include<stdio.h>

int main()
{
    int x=10;
    float x=10;
    printf("%d",x);
    return 0;
}
```

(a) 10.1

(c) 10

☒ (b) Compilation Error

(d) 10

Q.2. Identify wrong C keyword below

(1 mark)

(a) auto, double, int, struct

(b) break, else, long, switch

(c) case, enum, register, typedef

☒ (d) char, extern, intern, return

Q.3. What is the output of the following program

(1 mark)

```
#include<stdio.h>

int main()
{
```

```
printf("%x",-1<<4);
```

```
return 0;
```

```
}
```

[Hint: -1 will be represented in binary form as: 1111 1111 1111 1111. %x a format specifier is used in the formatted string for hexadecimal integers.] (1 mark)

- (a) FFF0 (b) FFF1
(c) FFF2 (d) FFF3

Q.4. Size of float, double and long double in Bytes are? (1 mark)

- (a) 4, 8, 16 (b) 4, 8, 10
(c) 2, 4, 6 (d) 4, 6, 8

Q.5. If you do not specify a storage class for a Variable? (1 mark)

- (a) You get compiler error (b) You get compiler warning
(c) Output is null always (d) None of the above

Q.6. Which of the following characterize the typical feature of C language? (1 mark)

- (a) High level (b) Machine independent
(c) Structured (d) All of the above

Q.7. Which of the following operator has lowest level of precedence (1 mark)

- (a) % (b) &
(c) && (d) ?:

Q.8. Which is the correct sequence of the datatypes with respect to their sizes (1 mark)

- (a) char>int>float (b) int>char>float
(c) char<int<double (d) double>char>int

Q.9. If a is 15, then what would be the value of:

```
printf("%d , %d , %d , %d ", ++a , a++ , --a , a--);
```

 (1 mark)

- (a) 15,13,15,15 (b) 16,16,16,16
(c) 16,15,14,14 (d) 16,16,14,14

Q.10. Correct way of defining a symbolic constant (1 mark)

- (a) #define SCOPE=10 (b) #define SCOPE 10;
(c) #define SCOPE 10 (d) # define SCOPE 10

Part B

Answer all the Questions.

Each question carries five marks.
Marks)

(5 Questions x 4 marks = 20

Q.11. (a) Write a C program to input the value of days and convert it into years, months, weeks, and days? (2 marks)

(b) Write a C program to input the distance travelled by a car, and the fuel consumed. Next calculate the milage of the car? (2 marks)

Q.12. (a) Consider the following c code segment:

```
int a, b, c = 0;
void prtFun(void);
main( )
{
    static int a= 1;           /* Line 1*/
    prtFun( );
    a+= 1;
    prtFun( );
    printf("\n %d %d ",a, b);
}
void prtFun(void)
{
    static int a =2;           /* Line 2*/
    int b=1;
    a+=++b;
    printf("\n %d %d ",a, b);
}
```

(1) What would be the output of the above code? (1 mark)

(2) What output will be generated by the given code segment if:

- (i) Line 1 is replaced by auto int a = 1; (1 mark)
- (ii) Line 2 is replaced by register int a = 2; (1 mark)

(b) What is the output of the following program: (1 mark)

```
#include<stdio.h>
main()
{
    char x;
    int y;
    x=100;
    y=86;
    printf("Output is %c\n", x);
    printf("Output is %c\n", y);
    printf("Output is %d\n", x);
}
```

(c) What is the output of the following program: (1 mark)

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



```

int main()
{
    int x=100;
    printf("Output is %d\n", 10 + x++);
    printf("Output is %d\n", 10 + ++x);
}

```

Q.13. (a) Write a program to calculate area of any triangle using Heron's formula? (3 marks)

(b) Write a program to check whether a user can vote or not based on the input value, using ternary operator(?). (1 mark)

Q.14. A computer manufacturing company has the following monthly compensation policy to their sales-person:

Minimum base salary	:	1500.00
Bonus for every computer sold	:	200.00
Commission on total monthly sales	:	2 per cent

Since the prices of the computers are changing, the sales price of each computer is fixed at the beginning of every month. Write a program to compute a sales-person's gross salary. [Note: The number of units sold is 5 and price of a unit is 20450.00. The floating number should hold value upto two decimal places] (4 marks)

Q.15. Write a program to determine the Greatest Common Divisor (GCD) of Two numbers. Also write the ALGORITHM, and draw a Flowchart for the same? (4 marks)

101
10

$\sqrt{(s-a)(s-b)(s-c)}$
 $s = \frac{a+b+c}{2}$

99
10
109

13, 15

4, 2

$5 \times 20450 + 1500$
 $+ 200 \times 5$

15
13
15
13

13

4+3

