

```
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)



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### MINOR EXAMINATION-2023

Course Code: CS/IT-101

Course Name: Principles of Computer Programming

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

Date: 27-09-2023 (Tue)

Time: 10:00 AM -12:00 PM

Max Marks: 30

#### Instructions:

- Read the all questions carefully and answer accordingly.
- This Question paper contains fifteen questions.

### Part A

Answer all the Questions.

Each question carries one marks.  
(Marks)

(10 Questions x 1 Mark = 10 Marks)

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

(c) case, enum, register, typedef

(b) break, else, long, switch

(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.

(5 Questions x 4 marks = 20 Marks)

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 mileage 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;  
(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>
```