

GLA UNIVERSITY

C-PROGRAMMING

ASSIGNMENT

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ROLL NO - 52

SECTION- AL(2)

SUBJECT- C-PROGRAMMING

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Q1.

```
.#include<stdio.h> int main() {  
float price,tax,total_price;  
    printf("enter the price of product and the rate of TAX : ");  
    scanf("%f %f",&price,&tax);    tax=((price*tax)/100);  
total_price=(price+tax);    printf("total price =%.2f  
",total_price);  
  
}
```

Q2.

```
#include<stdio.h> int  
main() {  
    int wages,hours,salary;  
    printf("enter the hours and wages per hour :");  
scanf("%d %d",&hours,&wages);
```

```

        if (hours>=30)
        {
            salary=2*(wages*hours);
printf("total salary : %d",salary);
        }
        else
        {
            salary=(wages*hours);
printf("total salary : %d",salary);
        }
    }

```

Q3.

```

#include<stdio.h> int main
() {
    float a=100,b=52.5,c=25,d=15,money_left; printf("2.0 kg Apple priced
Rs. 50.0 per kg,\n 1.5 kg Mango priced
Rs.35.0 per kg,\n 2.5 kg Potato priced Rs.10.0 per kg, \n and 1.0 kg
Tomato priced Rs.15 per kg."); money_left=(500-(a+b+c+d)); printf("\nmoney
to be returned back :%.2f",money_left);
}

```

Q4.

```

#include<stdio.h> int
main() {
    printf("NAME\t    SAHIL    VARSHNEY");
printf("\nDATE  Of  Birth\t 25\10\2004");
printf("\nMobile No\t 7505179525");
}

```

Q5.

```
#include<stdio.h> int main() { int Integer; char Character; float InputFloat;

    printf(" Please Enter a Character : "); scanf("%c",
&Character);

    printf(" Please Enter an Integer Value : "); scanf("%d",
&Integer);

    printf(" Please Enter Float Value : "); scanf("%f",
&InputFloat);

    printf(" \n The Integer Value that you Entered is : %d", Integer); printf(" \n
The Character that you Entered is : %c", Character); printf(" \n The Float
Value that you Entered is : %f", InputFloat); printf(" \n The Float Value with
precision 2 is : %.2f", InputFloat);

    return 0;
}
```

Q6.

```
#include<stdio.h> int
main()
{
    printf("Assume the total value is contained in a variable named cost");
    printf("\nthe sales total is : $ 172.53");
}
```

Q7.

```
#include<stdio.h> int
main()
{
    float a=6.5,b=6.5,c=6.5,d;
    d=6.5*3;
```

```
printf("total apples with raja are :%.1f",d);  
}
```

Q8.

```
#include<stdio.h> int  
main()  
{  
    float n;  
    printf("enter a number :");  
    scanf("%f",&n);  
    printf("the value you entered is : %.2f",n);  
}
```

Q9.

```
#include<stdio.h> int  
main()  
{  
    long long int a; printf("enter  
your mobile no.: ");  
    scanf("%lld",&a); printf("your  
no. : %lld",a);  
}
```

Q10.

```
#include<stdio.h> int  
main()
```

```

{
int p=30000,first,second;  printf("population
of city: 30000"); first=(p+((p*20)/100));

    printf("\npopulation of city during first year : %d",first);
    second=(first+((first*30)/100));
    printf("\npopulation of city during second year : %d",second);

}

```

Q11.

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

```
int main() {
```

```
char d;
```

```
printf("Enter the character");
```

```
scanf("%c",&d);
```

```
printf("ASCII value of %c = %d",d,d);
```

```
return 0;
```

```
}
```

Q12.

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

```
int main(){

float basic_pay,HRA,TA,salary;

printf("Enter the basic pay:");

scanf("%f",&basic_pay);


HRA=0.15*basic_pay;

TA=0.20*basic_pay;


salary= basic_pay+HRA+TA;

printf("Salary of an employee is:%.2f",salary);

return 0;

}
```

Q15.

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

```
int main(){
```

```
float frequency,wavelength,speed;

printf("enter the wavelength:");

scanf("%f",&wavelength);

printf("enter the speed:");

scanf("%f",&speed);

frequency=speed/wavelength;

printf("frequency of given wave is:%.2f",frequency);

return 0;
```

Q16.

```
#include<stdio.h>

#include<math.h>

int main(){ int
acceleration=5; int
distance=70; int
initial_velocity=30;
int final_velocity;
```

```

final_velocity=sqrt(pow(initial_velocity,2)+2*acceleration*distance)
; printf("final_velocity of car is:%d",final_velocity); return 0;

}

```

Q17.

```

#include<stdio.h>

#include<math.h>
> int main(){ int
u=0; int a=4; int
t=3; int v;
v=u+a*t;
printf("final_velocity is:%d\n",v);
int s;

s=u*t+(a*t*t)/2;
printf("distance travelled by horse\n:%d",s);
return 0;
}

```

Q18.

```

#include<stdio.h>

> int main(){ int
w,x,y,z;

printf("Enter the last four digits of your roll
no.\n"); printf("enter w= "); scanf("%d",&w);
printf("enter x= ");

```



```

scanf("%d",&x);
printf("enter y= ");
scanf("%d",&y);
printf("enter z= ");
scanf("%d",&z);
int sum;
sum=w+x+y+z;
printf("sum of the last four digit of roll no:%d",sum);
return 0;

}

```

Q22.

Header file refers to a file with extension . h that contains C function declarations and macro definitions which are to be shared between multiple source files.

Uses of header file.

1. Declaration of functions and types
2. Modularity and code organization
- 3.Code Reusability
4. Avoiding code Redundancy
5. Preprocessor Directives
6. Standard Library and Third part Libraries

Q23.

56 70 38

Q24.

Q25.

Library functions are built-in functions that are grouped together and placed in a common location called library.

List any four library function:

1. printf()
2. scanf()
3. sqrt()
4. strcpy()

Q26.

C is placement oriented Language

Q28.

"C % FOR % PLACEMENT"

Q29.

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

```
int main() {
```

```
    double distance, time;
```

```
    printf("Enter the distance (in kilometers) between GLA University and Delhi:");
```

```
    scanf("%lf", &distance);
```

```
    time = 4.0;
```

```
    double speed = distance / time;
```

```

printf("The speed of the bus is %.2lf km/h.\n", speed);

return 0;
}

```

Q30.

Answer 30:

```

#include<stdio.h>    #include<math.h>    int    main()    {        int
shyam=80,satyam=50,suman=70;                float        average;
average=(shyam+satyam+suman)/3; printf("calculate the average marks :
%.2f", average); return 0;
}

```

Q31.

```

#include <stdio.h>

```

```

int main() {    double moneyGivenToSaurav,
moneyGivenToSajal, temp;

```

```

    printf("Enter the amount of money given to Saurav: ");
scanf("%lf", &moneyGivenToSaurav);

```

```

    printf("Enter the amount of money given to Sajal: ");
scanf("%lf", &moneyGivenToSajal);

```

```

    temp        =        moneyGivenToSaurav;
moneyGivenToSaurav = moneyGivenToSajal;
moneyGivenToSajal = temp;

```

```

    printf("After rectifying the mistake:\n");    printf("Amount of money given
to Saurav: %.2lf\n", moneyGivenToSaurav);    printf("Amount of money
given to Sajal: %.2lf\n", moneyGivenToSajal);

```

```
    return 0;
}
```

Q32.

```
#include<stdio.h> #include<math.h>> int main() { int
speed,time,distance;  printf("enter the speed :");
scanf("%d", &speed);  printf("enter the time :");
scanf("%d",&time);          distance=speed*time;
if(speed<=4)
{
printf("He is comfortable to eat the food in the mess");  }  else if(speed>4)
{
printf("He is comfortable to eat the food in the mess");
}
printf("\nenter the distance : %d",distance); return 0;
}
```

Q33. yes

Q34.

The comments in c are human-readable explanation or notes in the source code of a C program.

Comments begin with /* and ended by */ characters. Comments can be a single line, or can even span several lines. It can be placed anywhere in the program.

Q35.

An ampersand (&) symbol must be placed before the variable name whatnumber,placing & means whatever integer value is entered by the user store at the "address" of the variable name. This is a common mistake for programmers often leading to logical error.

Q36.

```
#include <stdio.h> int main() { if
(sizeof(int) > -1) printf("Yes"); else
printf("No"); return 0;
}
```

OUTPUT NO ANSWER

Q39.

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

```
int main() { double
batteryPower = 1.0; // Initial
battery power (100%) double
targetPower = 0.75; // Target
battery power (75%) double
hours = 0; // Initialize the
hours to 0

while (batteryPower >
targetPower) {
    batteryPower -= 0.2; //
Decrease the battery power by 0.2
(0.2 represents 20% per hour)
hours++; // Increase the hours by 1
}

printf("The battery power is at
75%% after %.1lf hours.\n", hours);

return 0;
}
```

Q40.

(a) compiler

Q41.

(c) %o

Q42.

(b) %.2f

Q43.

(b) array

Q44.

```
#include<stdio.h> void main() { int x=0; x=
printf("\hello\b"); printf("%d",x);
}
```

OUTPUT

(c) "hello"8

Q45.

d. Garbage, 5

Q46.

(c) enum

Q47.

(a) c1

Q49.

a) $(325.54)_6 \approx 125.9444_{10}$ b) $(1001010110101.1110101)_2 \approx 4679.90625_{10}$

c) $(742.72)_8 \approx 482.90625_{10}$ d) $(AC94.C5)_{16} \approx 705881.76953125_{10}$ Q50.

$(DB56.CD4)_{16} = 110110110101101001101100.110010110100_2$ (Binary)
 $(DB56.CD4)_{16} = 656.514_8$ (Octal) $(DB56.CD4)_{16} \approx 56022.80108643_{10}$ (Decimal)

Q51.

$(100111011.10001)_2, (315.53125)_8,$

$CD.ACAA)_{16}$ Q52. a-16 b-8 c-16

Q53.

32770

Q54.

```
#include <stdio.h> int main() { float c = 5.0; printf ("Temperature in  
Fahrenheit is %.2f", (9/5)*c + 32); return 0; }
```

OUTPUT

Temperature in Fahrenheit is 37.00