

There are 25 questions (each 4 points) for a total of 100 points.
All questions are multiple choice, no points will be lost for wrong answers.

Name: _____ Student ID: _____

1- How many of the following variable names are valid in C programming language:

- I) Temperature% II) NumbeOfStudents_
III) _Cumulative-Gpa
IV) 2nd_Algebraic_Equation

a) 0 b) 1 c) 2 d) 3 e) 4

2- How many of the following variable types are illegal in C syntax?

- I) long integer II) real III) double IV) floating
V) unsigned char

a) 1 b) 2 c) 3 d) 4 e) 5

3- The following statement will generate which output:

```
printf("%3.1f\n", 12.345e-2);
```

a) 0.12345 b) 0.12 c) 1.2 d) 0.1 e) 1.23

4- What will be output of the following program segment?

```
int x= 3/5;
float y= 6/4;
printf("%.1f\n", x+y);
```

a) 2.1 b) 2.0 c) 1.0 d) 0.0 e) 1.5

5- What is the output of the following statement?

```
printf("%3.1f\n", 21.5);
```

a) 21 b) 21. c) 21.5 d) 1.5 e) 21.0030

6- What is the output of the following statement?

```
printf("%d\n", (int)1.5);
```

a) 1.5 b) 2 c) 1.0 d) 1 e) 2.0

7- Which of the following definitions is not valid in C ?

- a.) long int my_int;
b.) double mi-ne, Sayi;

- c.) float Mynumber_is9;
d.) string mystring;
e.) char X98char;

8- What could be the output of the following expression?

```
printf("%c%d%c\n", 49,2,51);
```

a) AbC b) b2c c) 123 d) B2C e) 65bC

9- How can we get the output: \ ' "

- a) printf("\\'");
b) printf("\\\\'");
c) printf("\\'\\");
d) printf("\\\\'\\");
e) printf("\\\\\\\\'\\");

10- If you enter a,b,c as input for the following code segment what would be the output?

```
char a,b,c;
scanf("%c%c%c",&a,&b,&c);
printf("%c%c%c",a,b,c);
```

a) 979899 b) 97,98,99 c) 97 98 99 d) a,b e) a,b,c

11- What is the value of below statement?

```
2 > 3 ? 4 : 5
```

a) 2 b) 3 c) 4 d) 5 e) FALSE

12- What is the value of below statement?

```
2 > 3 ? 4 ? 5 : 6 : 7
```

a) 3 b) 4 c) 5 d) 6 e) 7

13- What is the value of following expression?

```
((double)(3/2)+3)
```

a) 1.5 b) 1 c) 3 d) 4 e) 5

14- How many lines of output will be produced by the following code?

```
int i = 3 ;
while ( i %4 > 0 )
printf ("i= %d \n" , i++ ) ;
printf ("last: i=%d \n", i ) ;
```

- a) 1 b) 2 c) 3 d) 4 e) infinite

15- What is the output of the following code fragment?

```
int k=1 , t=2 ;
t = -++k;
printf ("%d %d" , k , t) ;
```

- a) 1 2 b) 1 3 c) -1 2 d) 2 -2 e) -2 1

16- Assuming a,b, and c are of type "int", and their values are 1,2,3, respectively, what is the output of following if statement:

```
if (!(a<5 && a%2==0) ) printf("%d",b);
if(a+b>3) printf("%d",c);
if(a%2>1) printf("%d",a+b);
if(b%2+a==0) printf("%d",b+c);
```

- a) 1 b) 2 c) 3 d) 4 e) 5

17- What is the output of the following program segment?

```
int x = -1;
if (x++==0) printf("%d\n",x);
else if(++x>1) printf("%d",x);
else printf("%d",x);
```

- a) -1 b) 0 c) 1 d) 2 e) 3

18- For what exact range of values of variables a and b, does the following code segment display the value 1?

```
m= -1;
if (a>20)
if (b<10)
if (a>=30)
m =4;
else m=0;
else m=1;
else m=2;
printf("%d",m);
```

- a) $a > 20$ b) $20 \leq a \leq 30$ c) $20 < a < 30$
 $b \geq 10$ $b \leq 10$ $b < 10$
d) $a \geq 30$ e) $20 < a < 30$
 $b < 10$ $b \geq 10$

19- Assuming that x,y and flag are integers, what is the value printed by the following if statements?

```
if(x>y)
if(x>z) printf("%d", x);
else
if(z>y) printf("%d",z);
else printf("%d", y);
else
if(y>z) printf("%d",y);
else printf("%d",z);
```

- a) minimum b) maximum c) median
d) last e) indeterminate

20- What is the output of the following program segment?

```
int x=6, y=3, A=3, B=5, C=7;
if (x < A && y > B)
if (y > 0)
printf("A");
else printf("B");
else if (y>C || x>0)
printf("C");
```

- a) A b) B c) C d) AC e) no output

Use below program to answer questions 21-22.

```
#include <stdio.h>
int main() {
int a=0,b=0,c=0,f,g,h;
scanf("%d%d%d",&f, &g, &h);
for (a=g;a<f;a++)
switch(a) {
case 1: c++;break;
default: c += 2;
}
printf("%d\n",c);
}
```

21- What is the output of the above program for the input 4 1 1?

- a) 1 b) 2 c) 3 d) 4 e) 5

22- What is the output of the above program for the input 5 2 1?

- a) 1 b) 4 c) 6 d) 10 e) 7

23- What is the output of the above program for the input 5 1 1?

- a) 1 b) 4 c) 5 d) 7 e) 15

Use below program for questions 24-25.

```
#include <stdio.h>
int main() {
    int a=0, b=0, c=0, f, g;
    scanf("%d%d",&f, &g);
    c=0;
    for (a=g;a<f;a++)
    for (b=g;b<a;b++)
        c++;
    printf("%d\n",c);
}
```

24- one of the below is the output of the above program for the input 5 2?

- a) 3 b) 6 c) 10 d) 12 e) 15

25- one of the below is the output of the above program for the input 6 3?

- a) 3 b) 6 c) 10 d) 12 e) 15