

- (c) Three (d) **Many**
7. _____ is control string in the statement `printf("Result = %d",r);`:
(a) %d (b) **Result = %d**
(c) r (d) None
8. The functions used for input and output are stored in header file:
(a) conio.h (b) math.h
(c) output.h (d) **stdio.h**
9. _____ is used for flag:
(a) + (b) -
(c) **Both a and b** (d) None
10. The format specifier %u is used for:
a) integer (b) **Unsigned Short int**
c) Unsigned float (d) Unsigned long int
11. The escape sequence for carriage return is
a) \a (b) \c
(c) **\r** (d) \f
12. Which of the following format specifier is used for character type data
a) \c (b) **%c**
c) %s (d) %ch
13. What will be the output of `printf("%d", 'a');` ?
a) 65 (b) A
(c) **97** (d) a
14. _____ format specifiers is used for integer type data:
(a) **%d** (b) %s
(c) %c (d) %f
15. _____ format specifiers is used for float type data:
(a) %d (b) %s
(c) %c (d) **%f**
16. The %x is a format specifier for:
(a) long integer value (b) octal value
(c) **hexadecimal value** (d) double value
17. How many digits are printed to the right of the decimal point in real number?
(a) 15 (b) 3

- (c) **6** (d) 5
18. _____ is used with format specifier to display output left-justified:
(a) % (b) +
(c) - (d) *
19. The escape sequence to insert horizontal tab is
a) \r b) \f
c) \tab **d) \t**
20. Which of the following format specifier is used for string type data?
a) %s b) %c
c) %f d) %string
21. What will be the output of `printf("%.3f", 3.45678);` ?
a) 345678 b) 3.45678
c) 3.457 d) none of above
22. What will be the output of `printf("%d", 'A');` ?
(a) A **(b) 65**
(c) 'A' (d) 97
23. Which will be the output of `printf("%c", 'A');` ?
(a) A (b) 65
(c) 'A' (d) 97
24. _____ is the general form of format specifier for real value:
(a) m.n%f **(b) %m.nf**
(c) %fm.n (d) None
25. What will be the output of `printf("%.2f", 5.555);` ?
(a) 5.555 (b) 5.55
(c) 5.56 (d) 5.00
26. _____ characters indicates the beginning of escape sequence:
**(a) ** (b) /
(c) | (d) %
27. The escape sequence to insert tab in C is:
(a) \n **(b) \t**
(c) \r (d) \f
28. _____ is used to move the cursor at the beginning of current line:
(a) \n (b) \t

- (c) `\r` (d) `\f`
29. _____ can be used to begin a new line in C:
- (a) `\n` (b) `\a`
(c) `\r` (d) `\b`
30. The escape sequence to produce beep from computer speaker is:
- (a) `\t` (b) `\a`
(c) `\n` (d) `\b`
31. _____ is a correct statement to print "Pakistan" in double quotes:
- (a) `printf(““Pakistan””);` (b) `printf(“\”Pakistan\”)`
(c) **`printf(“\”Pakistan\”);`** (d) None
32. The field width will automatically _____ if the specified space is not sufficient to accommodate the value
- a) Adjusted b) Shrink
c) Expand d) All of Above
33. A format specifier always begins with the ____ symbol
- a) %** b) \
c) / d) %d
34. Escape sequence characters always begins with a ____ character
- a) % **b) **
c) / d) %d
35. Which characters cause an escape from the normal interpretation of a string so that the next character is recognized as having a special meaning.
- a) Format String b) Format Specifier
c) Special Characters **d) Escape Sequences**
36. _____ is a correct statement to input value to a variable 'x' of float data type:
- (a) `scanf(“%f”, x);` (b) `scanf(x);`
(c) **`scanf(“%f”, &x);`** (d) `scanf(&x);`
37. The ampersand (&) used in “scanf()” function is called:
- (a) address indicator (b) cell address
(c) binary operator **(d) address operator**
38. The function `getche()` is defined in:

- (a) `stdio.h` (b) `string.h`
(c) `math.h` (d) **`conio.h`**
39. Which escape sequence is used for backspace
a) `\B` (b) `\b`
c) `/b` d) `/s`
40. `scanf()` function is used to get data from the
a) computer (b) processor
c) input device d) program
41. _____ is used to get input from user during program execution:
(a) `scanf()` (b) `gets()`
(c) `getche()` (d) **All of these**
42. _____ is used to get input from user into any types of variables during the execution of program:
(a) `scanf()` (b) `gets()`
(c) `getche()` (d) `getch()`
43. Instead of the variable name the `scanf()` requires _____ of the variable to store the input value into it
a) Name **b) Address**
c) Operator d) Data
44. Which character is used as address of operator
a) `$` (b) `?`
c) `#` **d) `&`**
45. `getch()` function is used to input _____ character
a) One (b) Many
c) Two d) All of Above
46. `getche()` function is used to input _____ character
a) One (b) Many
c) Two d) All of Above
47. Which input function will not print the entered character on the screen

- a) scanf() b) getch()
c) getche() d) getline()

Q.3 Write T for True and F for false Statements.

1. printf and scanf are standard identifiers. (T)
2. In C language, all variables must be declared before being used. (T)
3. Standard data types are not predefined in C language. (F)
4. The double data type required 4 bytes memory. (F)
5. In scientific notation the exponent represent the value of the number and mantissa represents the power to which it is raised. (F)
6. The symbol for modulus operator is %. (T)
7. The symbol = is used to compare two values. (T)
8. Operator precedence determines the order of evaluation of the operators in an expression. (T)
9. For many compilers a C variable name can be up to 31 characters. (T)
10. C program can only use lower case letters in variable names. (F)


```

    ch=getche();
    printf("\nASCII code for %c is %d", ch, ch);
}

```

Q7. Character is input by the user and print ASCII code of character use scanf() function:

Answer:

```

#include<stdio.h>
void main()
{
    char ch;
    printf("Enter a character ");
    scanf("%c", &ch);
    printf("\nASCII code for %c is %d", ch, ch);
}

```

Q8. Show how the value -17.246 would be pintoed using the formats %8.4f, %8.3f, %8.2f, %8.1f, %8.0f, and %0.2f

Answer:

Statement	Output(□ represents spaces)
printf("%8.4f",-17.246);	-17.2460
printf("%8.3f",-17.246);	□-17.246
printf("%8.2f",-17.246);	□□-17.25
printf("%8.1f",-17.246);	□□□-17.2
printf("%8.0f",-17.246);	□□□□□-17
printf("%0.2f",-17.246);	-17.25

Q9. Assuming x (type double) is 21.335 y (type int) is 200 Show output of the following statement on paper

Answer:

Statement	Output(□represents spaces)
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printf("x is %6.2f\t y is %4d\n", x, y);	x is 21.34 y is 200	
printf("y is %d \n", y);	y is 200	
printf("x is %.1f\n", x);	x is 21.3	

Q10. If the variables a, b and c are 307, 408.558 and -12.31 respectively, write a statement that will display the following line:

__307____408.558____-12.31

Answer:

```
printf("%5d %11.3f %9.2f", a, b, c);
```

Q11. Write a program that gets the radius of the circle and calculate the area (= $\pi \times \text{radius}^2$) of circle.

Answer:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    float r,area;
    #define pi 3.14159
    clrscr();
    printf("Enter radius of circle : ");
    scanf("%f", &r);
    area = pi*r*r;
    printf("\nArea of circle = %.2f", area);
}
```

Q12. Write a program that store the values 'A', 'U', 3.456E10 and 50 in separate memory cells. The program should get the first three values as input data, but use assignment operator to store last value. The first two values are characters, third value is real, last value is integer

Answer:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    float f;
    char ch1, ch2;
    int k;
    clrscr();
    printf("Enter first character : ");
    ch1=getche();
    printf("Enter second character : ");
    ch2=getche();
    printf("Enter float value : ");
```

```

scanf("%E", &f);
k = 50;
printf("\nCharacters are %c and %c ", ch1, ch2);
printf("\nfloat value is %8.3E ", f);
printf("\nInteger value is %d ", k);
}

```

Q13. Write a program that converts Fahrenheit temperature to Celsius (centigrade temperature).

Answer:

```

#include<stdio.h>
#include<conio.h>
void main()
{
    float f, c;
    clrscr();
    printf("Enter temperature in Fahrenheit: ");
    scanf("%f", &f);
    c = 5.0/9.0*(f-32);
    printf("\n Temperature in Celsius = %f", c);
}

```

Output:

```

Enter temperature in Fahrenheit: 212
Temperature in Celsius = 100.000000

```

Q14. Write a program that takes a positive number with a fractional part and rounds it to two decimal places.

Answer:

```

#include<stdio.h>
#include<conio.h>
void main()
{
    float f;
    clrscr();
    printf("Enter a Number: ");
    scanf("%f", &f);
    printf("\n Rounded Number = %10.2f", f);
}

```

Output:

```

Enter a Number: 756.258563
Rounded Number = 756.26

```

Q15. Perform arithmetic operations:

Answer:

```

#include<stdio.h>
void main ( )
{
    float a,b;

```

```
printf("\n Enter two Numbers :      ");
scanf("%f %f", &a,&b);
printf("\n Addition = %.2f",a+b);
printf("\n Subtraction = %.2f",a-b);
printf("\n Multiplication = %.2f",a*b);
printf("\n Division = %.2f",a/b);
}
```

Q16. Calculate area and perimeter of a triangle (input three sides):

Answer:

```
#include<stdio.h>
#include<math.h>
void main ( )
{
float a,b,c,s,area,p;
printf("\n Enter first side :  ");
scanf("%f", &a);
printf("\n Enter 2nd side :  ");
scanf("%f", &b);
printf("\n Enter 3rd side :  ");
scanf("%f", &c);
s=(a+b+c)/2;
p=a+b+c;
area = sqrt(s*(s-a)*(s-b)*(s-c));
printf("\n Perimeter = %.2f", p);
printf("\n AREA = %.2f", area);
}
```

Q17. Swapping the values of two variables.

Answer:

```
#include<stdio.h>
void main( )
{
int a,b,c;
printf("\n Enter first Number :      ");
scanf("%f", &a);
printf("\n Enter 2nd Number :  ");
```

```
scanf("%f", &b);  
c=a;  
a=b;  
b=c;  
printf("\n Value of A= %d\t Value of B = %d",a,b);  
}
```

