

MODEL PAPER OF CONCEPTS OF COMPUTER PROGRAMMING IN C

SECTION C: SHORT ANSWER QUESTIONS

- Q1. What are unary operator & their uses?
- Q2. What is formatted and unformatted Input / Output function ?
- Q3. What is the use of exit function, What is difference between exit and break.
- Q4. Why goto statements are avoided?
- Q5. What is the limitation of switch statements?
- Q6. What is meant by variable and constant in C, Explain different types of constant in C.
- Q7. What do you mean by type casting? why is it necessary?
- Q8. Distinguish between the following :
- (a) Actual and formal arguments
 - (b) Global and local variables
 - (c) Automatic, static and extern variables
- Q9. State the fundamental data types and their sizes in C .
- Q10. What is the relationship between the data item represented by a variable *v* and the corresponding pointer variable *pv*?
- Q11. What do you understand by pointer arithmetic.
- Q12. Explain the difference between postfix and prefix increment operators. Show how it affects the result of an expression.
- Q13. What are functions? Explain the difference between iterative and recursive function calls.
- Q14. What are arrays ? How are they declared in C.? Explain integer array in detail.
- Q15. Why should all variables be declared before they are used in a C program?
- Q16. Discuss different modes in which a file can be opened by giving suitable examples.
- Q17. Rewrite the following for statement into an equivalent while statement
- ```
For (i = j ; i < k; i++)
 if (in[i] == '?')
 q++;
```
- Q18. Put parenthesis in the following expression:  
 $a = b + c * d \ll 2 \& B;$
- Q19. What is the output of the following program:

```
#include <stdio.h>
main ()
{
 int j, k, x = 0;
 for (j = 0; j < 5 ; j++)
 for (k = 0; k < j; ++k)
 {
 x += (j + k - 1);
 }
}
```

```

 printf("%d", x);
 break;
 }
 Printf("\n x = %d", x);
}

```

Q20. Distinguish between call by value and call by reference.

Q21. What will be the output of the following program ?

```

int f(int)
main ()
{
 int i ;
 for (i=3 ; i < 5; i++)
 printf("%d\n", f(i));
}

int f (int n)
{
 static int x = 1;
 int y = 3;
 x = n;
 return x + n + y ;
}

```

Q22. What is the output of the following.

```

for (m =0 ; m < 3 ; ++m)
 printf ("%d\n", (m%2) ? m: m + 2);

```

Q23. What is the output of the following .

```

int m = -14, n= 3;
printf ("%d\n", m/n * 10);
n = -n;
printf("%d\n", m/n * 10);

```

Q24. What happens if an output data item contains  
 (a) more characters than the specified field width and  
 (b) fewer characters than the specified field width.

Q25. What is a data structure? Why is an array called a data structure?

Q26. What happens when an array with a specified size is assigned

- (a) with values fewer then the specified size and
- (b) with values more than the specified size

Q27. What is the output of the following program ?

```
main () {
 char string [] = "Hello world";
 int m;
 for (m = 0; string [m] != '\0'; m++)
 if ((m%2) == 0)
 printf("%c", string[m]); }
}
```

Q28 Define computer with its positive and negative characteristics.

Q29. What is software? Explain its type with difference?

Q30. What do you mean by operating system? Define the task which is performed by Operating system in detail.

Q31. Make conversions of the following :

- a) 1001011 in binary to decimal
- b) 12.45 in decimal to binary
- c) 765 in octal to binary
- d) FFA in hexadecimal to binary
- e) 1001101110 in binary to octal
- f) 101110111 in binary to hexadecimal
- g) 10001.1001 in binary to decimal
- h) 12344.567 in hexadecimal to decimal
- i) 765.234 in octal to decimal
- j) 1235.567 in octal to hexadecimal

Q32. Explain History of C. Also explain why C is called middle level language.

Q33. Explain Storage type and Data type in detail.

Q34. What do you mean by operators? Explain its type and also explain operator precedence and associativity.

Q35. What do you mean by construct? How many type of constructs are there in C language ? Explain with the help of example.

Q36. What do you mean by modular programming?

Q37. What is function? Define its type ? Explain the different types of user defined functions.

- Q38. What do you mean by storage class ? Explain different types of storage classes.
- Q39. What is string ? Explain at least 10 string functions declared in string.h header file with the help of example.
- Q40. What do you mean by pointer? What are the similarities and dissimilarities between array and pointer?
- Q41. What do you mean by DMA? Explain in Detail and discuss its advantages.
- Q42. What is data structure? Define its type.
- Q43. Explain stack and linked list in short.
- Q44. What is searching? How many types of searching are there? Define one searching methodology with the help of example.
- Q45. What is C preprocessor? Explain its type in detail.
- Q46. What do you mean by File Handling ? Write a program which will open a file and count the number of characters, words, and lines written inside the file.
- Q47. What is parameter ? What is the need of parameter?
- Q48. Write short note on following :
- (a) SDLC
  - (b) Algorithm
  - (c) Multiprogramming
  - (d) Structure and Union
- Q49. Find out the difference between following :
- (a) Compiler and interpreter
  - (b) Continue and break Statement
  - (c) While and do while

(d) Structure and Union

(e) Switch and else if ladder

Q50. What are escape sequences? Explain in detail.

Q51. if we have the following :

```
int a[4] = { 10, 20, 30, 40}, *p;
```

```
p=a;
```

what is meant by

(1) p++

(2) \*p

(3) \*++p;

Q52. Given the following declarations:

```
int x= 10, y=10;
```

```
int *p1 = &x, *p2 = &y
```

what is the value of each of the following expressions?

(a) (\*p1) ++

(b) --(\*p2)

(c) \*p1 + (\*p2)--

(d) ++ (\*p2) - \*p1

Q53. A C program contains the following declarations and initial assignments:

```
int i = 8, j=5;
```

```
float x = 0.005, y= -0.01;
```

```
char c = 'c', d='d';
```

Determine the value of each of the following expressions:

(a)  $(3 * i - 2 * j) \% (2 * d - c)$

(b)  $2 * ((i/5) + (4 * (j - 3)) \% (i + j - 2))$

(c)  $(1 - 3 * j) \% (c + 2 * d) / (x - y)$

Q54. A C program contains the following declarations and initial assignments:

```
int i = 8, j=5, k;
```

```
float x = 0.005, y= -0.01, z;
```

```
char a, b, c = 'c', d='d';
```

Determine the value of each of the following expressions:

(a)  $k = (j == 5) ? i : j;$

(b)  $i \% = j$

(c)  $z = (y >= 0) ? y : 0;$

Q55. What will be the value of c after the execution of following program.

```
#include<stdio.h>
#include<conio.h>
void main ()
{
int c=1,d=0;
clrscr();
while (d<=9)
{
printf("\n %d %d", ++d,++c);
}
}
```

Q56. What will be the value of 'x' after the execution of following program?

```
#include<stdio.h>
#include<conio.h>
void main ()
{
int k;
float x=0;
clrscr();
for (k=0;k<10;k++)
x+=.1;
printf("\nx=%g",x);
}
```

Q57. What will be the value of 'f' after the execution of following program?

```
#include<stdio.h>
#include<conio.h>
void main()
{
char k;
float f=65;
clrscr();
for (k=1;k<=10;k++)
{
f-=.1;
}
printf("\nf=%g:.f);
}
```

Q58. What will be the output of the following program?

```
void test (int *a)
```

```

main ()
{
 int x= 50;
 test (& x) ;
 printf("%d\n", x);
}

void test (int *a)
{
 *a = *a + 50;
}

```

Q59. Explain the meaning of the following.

- a) double (\*a) [12];
- b) double \*a [12];
- c) long \*p [10] [20];
- d) int (\*pf) (char a, char b);
- e) double \*funct ( double \*a, double \*b , int \*c);

Q60. Write the appropriate declaration of the following :

- a) Declare a function that accepts two integer arguments and returns a pointer to a long integer.
- b) Declare an array of strings whose initial values are "red", "green", "blue".
- c) Declare a one dimensional floating point array using pointer notation.
- d) Declare a two dimensional floating point array, with 15 rows and 30 columns, using pointer notation.
- e) Declare a pointer to a function that accepts three integer arguments and returns a floating- point quantity.

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