

17212

11920

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.

**Marks**

1. Attempt any TEN of the following :

20

- (a) State the use of % d and % f and write the printf statement of 'C' using above.
- (b) Explain the use of break statement.
- (c) List different data types in C.
- (d) What is a variable ?
- (e) What is the use of scanf() function ?
- (f) Write the o/p of following program.

```
# include <stdio.h>
{
char ch = 'a';
switch (ch)
{
case 'a':
printf ("A");
case 'b':
printf ("B");
case 'c':
printf ("C");
default:
printf ("D");
}
```

[1 of 4]

P.T.O.

- (g) Give the meaning of declaration `int *ptr`.
- (h) Give the syntax to declare two-dimensional array.
- (i) What will be o/p of following segment :

```
char S1[ ] = "MUMBAI"
```

```
char S2[ ] = "DELHI"
```

```
strncpy (S1, S2);
```

```
printf ("% S", S1);
```

- (j) How does structure differ from an array ?
- (k) What is the use of size of operator ?
- (l) State the rules for initializing structure.

**2. Attempt any FOUR of the following :**

**16**

- (a) What are constants ? Explain different types of constants in 'C'.
- (b) Write a 'C' program to read three integer values from the keyboard and find the biggest from 3 nos.
- (c) Explain declaration of one-dimensional array. Also explain initialization of one-dimensional array.
- (d) Explain any two string-handling functions.
- (e) Explain different ways of passing parameters to function.
- (f) Write a 'C' program for addition of two  $3 \times 3$  matrix.

**3. Attempt any FOUR of the following :**

**16**

- (a) Explain declaration and initialization of string.
- (b) Explain recursive function with example.
- (c) Explain Else – if ladder.

- (d) What is the o/p of following code ? Explain following syntax.

```
int m = 0;
do
{
    if (m > 10)
        continue;
    m = m + 10;
} while (m < 50);
printf ("%d", m);
```

- (e) What is operator precedence and associativity ?  
(f) Explain need of functions.

**4. Attempt any FOUR of the following :**

**16**

- (a) State and explain any four bitwise operators in 'C'.  
(b) Explain pointer expressions and pointer increment.  
(c) Explain any two storage classes.  
(d) Write a program to accept 10 numbers and print average of 10 numbers using array.  
(e) Explain conditional operator with example.  
(f) Write a program to declare a structure employee having data members emp\_name, emp\_id and emp\_sal. Accept data and display information of one employee.

**5. Attempt any FOUR of the following :**

**16**

- (a) Explain declaration and initialization of pointer variables.

**P.T.O.**

- (b) Find the o/p of following program :

```
main ( )  
{  
    int X = 100;  
    printf ("% d\n", 10 + X++);  
    printf ("% d\n", 10 + ++X);  
}
```

- (c) Write a program to determine whether a given no. is “odd” or “even” and print the message

Number is even

or

Number is odd

- (d) Write a ‘C’ program to accept a string and display a list of ASCII codes that represent accepted string.
- (e) Write a ‘C’ program to sort elements of an array in ascending order.
- (f) Explain the working of increment and decrement operator.

**6. Attempt any FOUR of the following :**

**16**

- (a) Explain different arithmetic operators that are permitted on pointers.
- (b) Write a program in ‘C’ using pointer to determine length of string.
- (c) Explain following category of function :  
Function with no arguments with return value.
- (d) Explain call by value and call by reference methods for calling functions.
- (e) Write a ‘C’ program to swap the values of two integer numbers.
- (f) Write a ‘C’ program using function of find sum (addition) of two numbers.
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