***PRACTICAL EXAM***

**QUESTION : 1**

Create a C program to check if a number is entered by user is a positive or consonant using a switch statement.

**CODE :**

#include <stdio.h>

int main() {

int number;

printf("Enter a number:");

scanf("%d",&number);

switch(number > 0){

case 1:

printf("Enter %d positive:\n",number);

break;

case 0:

switch(number < 0){

case 1:

printf("Enter %d negative:\n",number);

break;

case 0:

printf("Enter %d zero:\n",number);

break;

}

break;

}

return 0;

}

**OUTPUT :**

Enter a number:12

Enter 12 positive:

=== Code Execution Successful ===

**QUESTION : 2**

Create a C program to find the smallest element in an 1D array.

**CODE :**

#include <stdio.h>

int main() {

int array[100],size, i;

int min;

printf("Enter the size of the array:");

scanf("%d",&size);

printf("Enter %d elements:\n",size);

for(i=0;i<size;i++){

scanf("%d",&array[i]);

}

min = array[0];

for(i=1;i<size;i++){

if(array[i]<min){

min = array[i];

}

}

printf("The smallest element in the array is:%d\n",min);

return 0;

}

**OUTPUT :**

Enter the size of the array:5

Enter 5 elements:

12

44

27

13

67

The smallest element in the array is:12

=== Code Execution Successful ===

**QUESTION : 3**

Write a C program that defines a function to reverse a 3 digit number.

**CODE :**

#include <stdio.h>

int reverseNumber(int num){

int rev=0;

while(num!=0){

rev = rev \* 10+num%10;

num /= 10;

}

return rev;

}

int main() {

int number,reversedNumber;

printf("Enter a 3-digit number:");

scanf("%d",&number);

if(number<100||number>999){

printf("Please enter a valid 3-digit number.\n");

}

reversedNumber = reverseNumber(number);

printf("Reversed number:%d\n",reversedNumber);

return 0;

}

**OUTPUT :**

Enter a 3-digit number:345

Reversed number:543

=== Code Execution Successful ===

**QUESTION : 4**

Write a C program to find a square of each elements of an 1D array using pointer.

**CODE :**

#include <stdio.h>

int main() {

int a[]={22,23,12,5,15,2,4,8,3,6};

int \*ptr;

for(int i=0;i<10;i++){

ptr=&a[i];

printf("%d\n",((\*ptr)\*(\*ptr)));

}

return 0;

}

**OUTPUT :**

484

529

144

25

1

4

16

64

9

36

=== Code Execution Successful ===

**QUESTION : 5**

Develop a C program that defines a structure representing a house (with attributes like room\_quantity,established\_year,and city) List N number of house’ details using Array of objects.

**CODE :**

#include <stdio.h>

#include <string.h>

struct House{

int room\_quantity;

int established\_year;

char city[50];

}home;

int main() {

{

home.room\_quantity=10;

home.established\_year=5;

char city[50]="Ahemdabad";

strcpy(home.city,city);

printf("room\_quantity is %d\n",home.room\_quantity);

printf("established\_year is %d\n",home.established\_year);

printf("city is %s\n",home.city);

}

{

home.room\_quantity=15;

home.established\_year=20;

char city[50]="Rajkot";

strcpy(home.city,city);

printf("room\_quantity is %d\n",home.room\_quantity);

printf("established\_year is %d\n",home.established\_year);

printf("city is %s\n",home.city);

}

{

home.room\_quantity=25;

home.established\_year=12;

char city[50]="Amreli";

strcpy(home.city,city);

printf("room\_quantity is %d\n",home.room\_quantity);

printf("established\_year is %d\n",home.established\_year);

printf("city is %s\n",home.city);

}

return 0;

}

**OUTPUT :**

room\_quantity is 10

established\_year is 5

city is Ahemdabad

room\_quantity is 15

established\_year is 20

city is Rajkot

room\_quantity is 25

established\_year is 12

city is Amreli

=== Code Execution Successful ===

**QUESTION : 7**

Print a below pattern using nested for lopp in C language.

100

81 81

64 64 64

49 49 49 49

36 36 36 36 36

**CODE :**

#include <stdio.h>

int main() {

int i, j, num = 100;

for (i = 1; i <= 5; i++) {

for (j = 1; j <= i; j++) {

printf("%d ", num);

}

num -= 19;

printf("\n");

}

return 0;

}

**OUTPUT :**

100

81 81

64 64 64

49 49 49 49

36 36 36 36 36