

# Indian Institute of Technology Mandi

## MA 514: Computer Programming

### Tutorial-10

#### Questions

#### 1. What will be the output of the following:

(a)

```
#include <stdio.h>
int main () {
    int value_array[] = {141, 1};
    int *point;
    point = value_array;
    for (int a = 0; a < 2; a++) {
        printf("Value of value_array[%d] = %d\n", a, *point);
        printf("Address of value_array[%d] = %p\n", a, point);
        point++;
    }
    return 0;
}
```

(b)

```
#include <stdio.h>
int main () {
    int value_array[] = {141, 1032};
    int *point;
    int max=2;
    point = &value_array[max-1];
    for (int a = max; a > 0; a--) {
        printf("Value of value_array[%d] = %d\n", a-1, *point);
        printf("Address of value_array[%d] = %p\n", a-1, point);
        point--;
    }
}
```

```
    return 0;
}
```

**(c)**

```
#include <stdio.h>
int main () {
    int value_array[] = {141, 1032};
    int *point;
    int max=2;
    int a=0;
    point = value_array;
    while(point <= &value_array[max-1]) {
        printf("Value of value_array[%d] = %d\n", a, *point);
        printf("Address of value_array[%d] = %p\n", a, point);
        point++;
        a++;
    }
    return 0;
}
```

**(d)**

```
#include <stdio.h>

int main () {
    int val;
    int *pt;
    int **point;
    val = 55;
    pt = &val;
    point = &pt;
    printf("Value => val: %d\n", val);
    printf("Value => *pt: %d\n", *pt );
    printf("Value => **pptr: %d\n", **point);
    return 0;
}
```

```
}
```

**(e)**

```
#include <stdio.h>
int * printToscreen()
{
    static int val = 2364;
    return (&val);
}
int main()
{
    int * point;
    point = printToscreen();
    printf("Address is: %p\n", point);
    printf("Value is: %d\n", *point);
    return 0;
}
```

2. Write a program in C to print a string in reverse using a pointer.
3. Write a program in C to find length of string using pointer.
4. Write a program in C to copy one array to another using pointers.
5. Write a program in C to access a two dimensional array using pointer.