

Institute of Computer Technology
B. Tech. Computer Science and Engineering

Sub: ESFP – II

Practical -1

AIM: To learn about Dynamic Memory allocation.

1. I wants to find the largest value from the list and all list elements are assigned memory at runtime not compile time.

Test Data:

Input total number of elements (1 to 100): 5

Number 1: 5

Number 2: 7

Number 3: 2

Number 4: 9

Number 5: 8

The Largest element is: 9.00

2. Developer wants to take input text and print that text using reallocated memory & memory which can be released by compiler.

3. How can we create n number of strings with m length using runtime memory?

Post Practical Work:

1. How will you free the memory allocated by the following program?

```
#include<stdio.h>
#include<stdlib.h>
#define MAXROW 3
#define MAXCOL 4

int main()
{
    int **p, i, j;
    p = (int **) malloc(MAXROW * sizeof(int*));
    return 0;
```

}

- A. memfree(int p);
- B. dealloc(p);
- C. malloc(p, 0);
- D. free(p);

2. Assume integer is 2 bytes wide. How many bytes will be allocated for the following code?

```
#include<stdio.h>
#include<stdlib.h>
#define MAXROW 3
#define MAXCOL 4
```

```
int main()
{
    int (*p)[MAXCOL];
    p = (int (*) [MAXCOL])malloc(MAXROW *sizeof(*p));
    return 0;
}
```

- A. 56 bytes
- B. 128 bytes
- C. 24 bytes
- D. 12 bytes

3. How many bytes of memory will the following code reserve?

```
#include<stdio.h>
#include<stdlib.h>
```

```
int main()
{
    int *p;
    p = (int *)malloc(256 * 256);
    if(p == NULL)
        printf("Allocation failed");
    return 0;
}
```

- A. 65536
- B. Allocation failed
- C. Error
- D. No output