

Name: Roll No:
e.g. 17001Dept.:
e.g. CHESect.:
e.g. A4IIT Kanpur
ESC101 Fundam. of Comp.
Minor Quiz 7A
Date: March 20, 2018

Instructions:

Total: 10 marks

1. This question paper contains a total of 2 pages (2 sides of paper). Please verify.
2. Write your name, roll number, department on **every side of every sheet** of this booklet.
3. Write final answers **neatly with a pen**. Pencil marks can get smudged and you may lose credit.
4. Do not give derivations/elaborate steps unless the question specifically asks you to provide these.

Problem 1 (Output Printing: 4 marks). Give your answers in the space provided only.

1. In the space given, write down the output of the program given below.

```

1 #include <stdio.h>
2 #include <stdlib.h>
3
4 void fn(int **p)
5 {
6     int *j = (int*) malloc(sizeof(int));
7     *j = 2;
8     *p = j;
9     printf("%d\n", **p);
10 }
11 int main()
12 {
13     int i = 97, *p = &i;
14     fn(&p);
15     printf("%d\n", *p);
16     return 0;
17 }

```

1	2
2	2

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Date: March 20, 2018**Problem 2** (Output Printing: 6 marks). Give your answers in the space provided only.

1. In the space given, write down the output of the program given below.

```

1 #include <stdlib.h>
2 #include <stdio.h>
3
4 void swap(int *a, int *b) {
5     int temp = *a;
6     *a = *b;
7     *b = temp;
8 }
9
10 int main() {
11     int * a;
12     a = (int*) malloc(6*sizeof(int));
13     int ** b = &a;
14     for(int i = 0; i < 6; i++) {
15         *(a + i) = i;
16     }
17     for(int i = 2; i < 6; i++) {
18         for(int j = 0; j + i < 6; j++) {
19             swap(a + j, a + j + i);
20         }
21     }
22     for(int i = 0; i < 6; i++) {
23         printf("%d\n", *(a + i));
24     }
25     return 0;
26 }

```

1	0
2	4
3	1
4	2
5	5
6	3

BLANK SPACE: Any answers written here will be left ungraded.

No exceptions.

You may use this space for rough work.