

MIGANI, MATE 1 4 20

UNIVERSITY OF DAR ES SALAAM
COMPUTERSCIENCE AND ENGINEERING DEPARTMENT
IS 136: C PROGRAMMING
TEST II - June 2011
45 min

SECTION
Qn 1

14-75

Instructions: Answer ALL Questions

- A. Write the code fragment for each of the following requirement
- Define a structure named **kituo** which has as its attribute as **salary** of type **float**, and a pointer **link** to hold an address of the next element, call it **link** (2 points)
 - Declare a pointer variable called **matumizi**, whose data type is the structure you created above. (1 point)
 - Allocate a computer memory space for the variable **matumizi** you have just declared (1 point)
 - If the variable holding the address of the first element is called **thehead**, define a variable called **moving** and use it to move from the beginning of the list to the end, while multiplying the **salary** value by two for each node. (3 points)

- B. The following program intends to write to a file called **Input.txt** as long as the user has not entered a character to represent the end of file. However, the lines of the program have been mixed. You are required to re-arrange the lines so the program does what is intended, and for each line write also what it does. (5 points)

```

1.  main()
2.  {
3.  char c;
4.  FILE *f1;
5.  #include <stdio.h>
6.  putc(c,f1);
7.  f1=fopen("Input.txt","w");
8.  fclose(f1);
9.  }
10. while((c=getchar())!=EOF)

```

- C. For each statement in the list below, say whether they are TRUE or FALSE. Write your answers in Capital Letters (T for True and F for False) (0.5 points each)

1	FILE functions cannot work without including the string.h file
2	While Stacks apply LIFO, Queues apply FIFO
3	In linked lists the memory address of the last node is always NULL
4	Malloc function is the one that controls the entire computer memory and not the Operating System
5	When accessing members, arrays are more efficient than linked lists
6	Initialization means giving a variable some value while declaration means specifying amount of memory to be reserved for a variable