

Program: BE ELX/CE

Semester: First

Subject: Programming in C

Time: 2 hrs

FM: 50

PM: 25

Attempt ALL the questions. Figures at the margin indicate their full marks.

1. (a) With the help of a well labeled diagram, describe the different parts of a digital computer. 8
- (b) What is an array? How does it differ from an ordinary variable? Explain with proper example 7
2. (a) Write an algorithm and flowchart to find the factorial of any given number **a**. 7
- (b) Draw a flowchart and then write a program that will examine the value of a character variable entered by the user and that will print out one of the following messages based on the variable's value. 8
 - a) HOT if H or h is pressed
 - b) LUKE WARM if L or l is pressed
 - c) COLD if C or c is pressed
 - d) YOUR'RE ON MOON if anything else is pressed
3. (a) Write a program that prints out the following pattern. 8

```
*           *
**          **
***         ***
****        ****
*****       *****
```

- (b) What will be the final value of **a**, **b** and **c** after the following set of statements 3
- ```
int a=2, b=5, c;
c=a++ - --b;
```

```
b+=a++ + --c;
```

- (c) What will be the output of the following program segment? 4

```
void main()
{
 int i,j;
 i=0;
 while(++i<=5)
 {
 j=i;
 for(j=1;j<=i;j++)
 {
 if(i==j)
 break;
 printf("%d",j);
 }
 printf("\n");
 }
 getch();
}
```

4. Write short notes on (any TWO) 5
  - (a) break and continue statements
  - (b) Fifth generation of computers
  - (c) History of C