Fayoum University
Faculty of Engineering
Dept. of Engineering mathematics and Physics
Preparatory Year

Computer
First term of 2009/2010
Final Exam
Time : 2 hours

إمتحان تخلف التخلف

Model Answer

Question 1 [10 points]:

    1.1   **T.**

    1.2   **T**.

    1.3   **F**; Basic language is an example of high level language.

    1.4   **F; SQR (x)** used to computer the square root of x in the **Basic** language.

    1.5   **F; GOTO** statement used to perform unconditional branching.

Question 2 [10 points]:

    2.1   **E= C^2 + D^7**

    2.2   **IF K >= 2 THEN L = K^3 -K^(3/2)**

    2.3   **F = ABS(X + EXP(X)) * ((X + 6) / (Y - 3)) ^ 0.2**

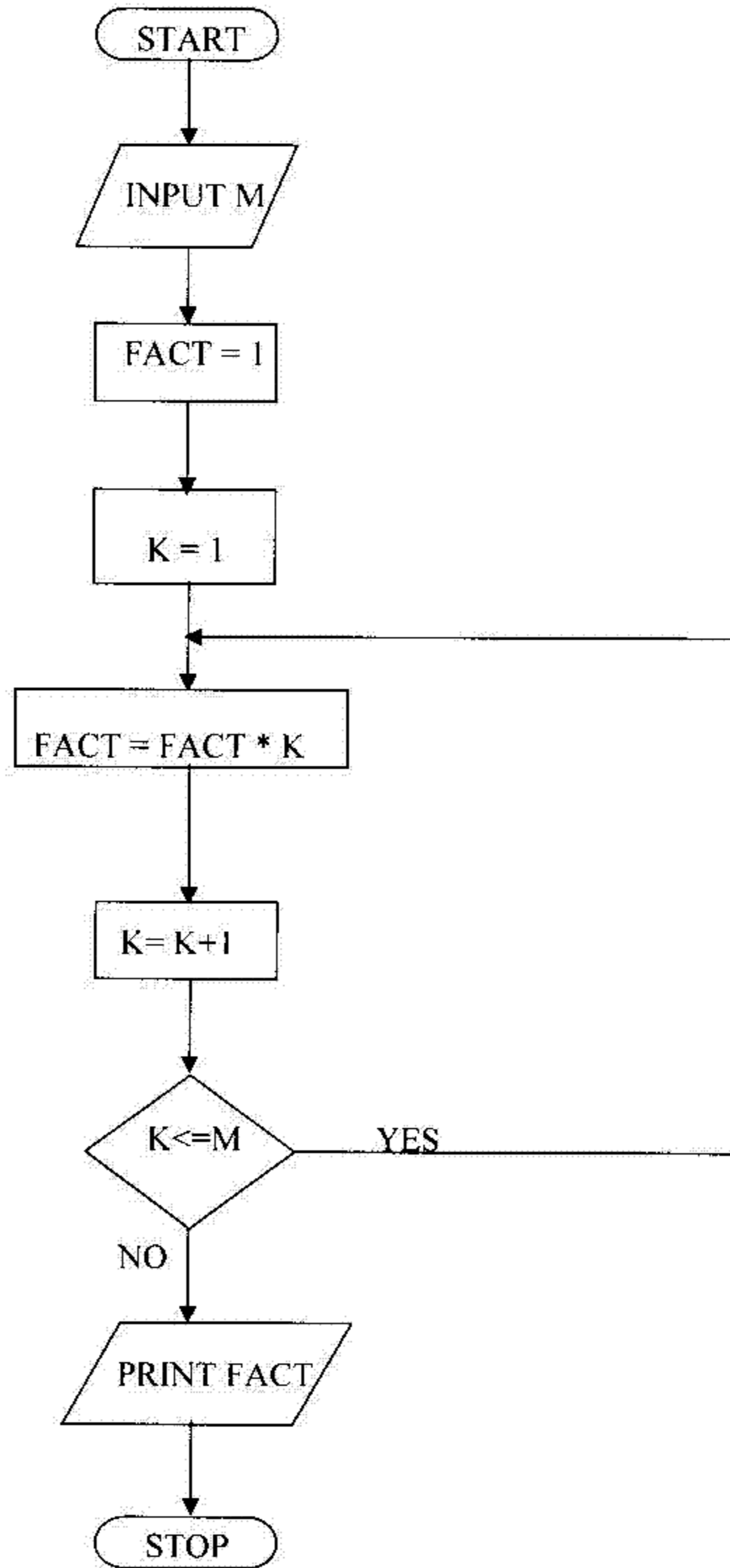   2.4   **Z = COS(K^ (2.5))**

    2.5   **Z = ATN(X * SIN(X))**

Question 3 [10 points]:

3.1

NOT	(	(A = 3)	OR	(B >= 1))	AND	(C > 1)
↓		↓	↓	↓	↓	↓
⑤		①	③	②	⑥	④

3.2

((A +	B / C)	>=	7)	OR	Z	OR	Y
↓	↓	↓		↓		↓	
②	①	③		④		⑤	

Question 4 [20 points]:

Solution:

```
                    ( START )
                        |
                        v
                  / INPUT M /
                        |
                        v
                  [ FACT = 1 ]
                        |
                        v
                  [  K = 1  ]
                        |
                        v  <---------------------+
              [ FACT = FACT * K ]                |
                        |                        |
                        v                        |
                  [  K = K+1  ]                  |
                        |                        |
                        v                        |
                   < K<=M >  ---- YES -----------+
                        |
                       NO
                        |
                        v
                 / PRINT FACT /
                        |
                        v
                    ( STOP )
```

```
10        REM THIS PROGRAM IS USED TO EVALUATE   M!
20        INPUT " Enter values of  M  " ; M
30        FACT = 1
40        FOR I = 1 TO M
50        FACT= FACT
60        NEXT  I
70        PRINT   M ; " ! =" , FACT
80        END
```

Question 5 [10 points]:

    5.1   Compute the maximum number in the given array

    5.2   The output of the program is 20.

(Good Luck)

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