Fayoum University

Computer

Faculty of Engineering

First term of 2009/2010

Dept. of Engineering mathematics and Physics

Final Exam

Preparatory Year

Time : 2 hours

Model Answer

Question 1 [10 points]:

1.1   **F ;**   Basic language is an example of **Application** software

1.2   **F;**   the **Compiler** is a translator system program used to translate a High-level language program into a Machine language program.

1.3   **T**

1.4   **F;** A **computer** is an electronic device capable of executing instructions based on algorithms stored in its memory.

1.5   **F; Machine language** is a program written using binary digits only

Question 2   [12 points]:

2.1 $Z = (X^2 + 1)/ Y + 4 * SQR(X^4 + 1)$

2.2   **IF TAN(X-Y) = 0 THEN X = Y**

2.3   **FOR K = 10 TO 1000 STEP 5**

     $Z(K) = (K + 1)$ ^ $(1/7)$

     NEXT K

2.4   **SP= AX * BX + AY * BY**

Question 3 [12 points]:

3.1

(A = 5)	OR	(B <> 1)	OR	NOT	Y
↓	↓	↓	↓	↓	
①	④	②	⑤	③	

3.2

(A	–	B	*	C	<=	2)	AND	Y	AND	Z
↓		↓		↓			↓		↓	
②		①		③			④		⑤	

3.3

(A	+	B)	/	C	–	EXP(	A	/	(C	+	A)	/	B)
↓		↓	↓		↓		↓		↓		↓		↓
①		⑥	⑦		⑤		③		②		④		

Question 4 [16 points]:

```
              ( START )
                 |
                 v
            / INPUT  Z, N /
                 |
                 v
            | S = 1, T=1 |
                 |
                 v
            |   I = 1   |
                 |
                 v  <--------------------+
            |  I = I + 1 |               |
                 |                       |
                 v                       |
            | T = T * Z / I |            |
                 |                       |
                 v                       |
            |   S = S+T   |              |
                 |                       |
                 v                       |
              < I < N >   YES -----------+
                 |
                NO
                 |
                 v
            / PRINT   S /
                 |
                 v
              ( STOP )
```
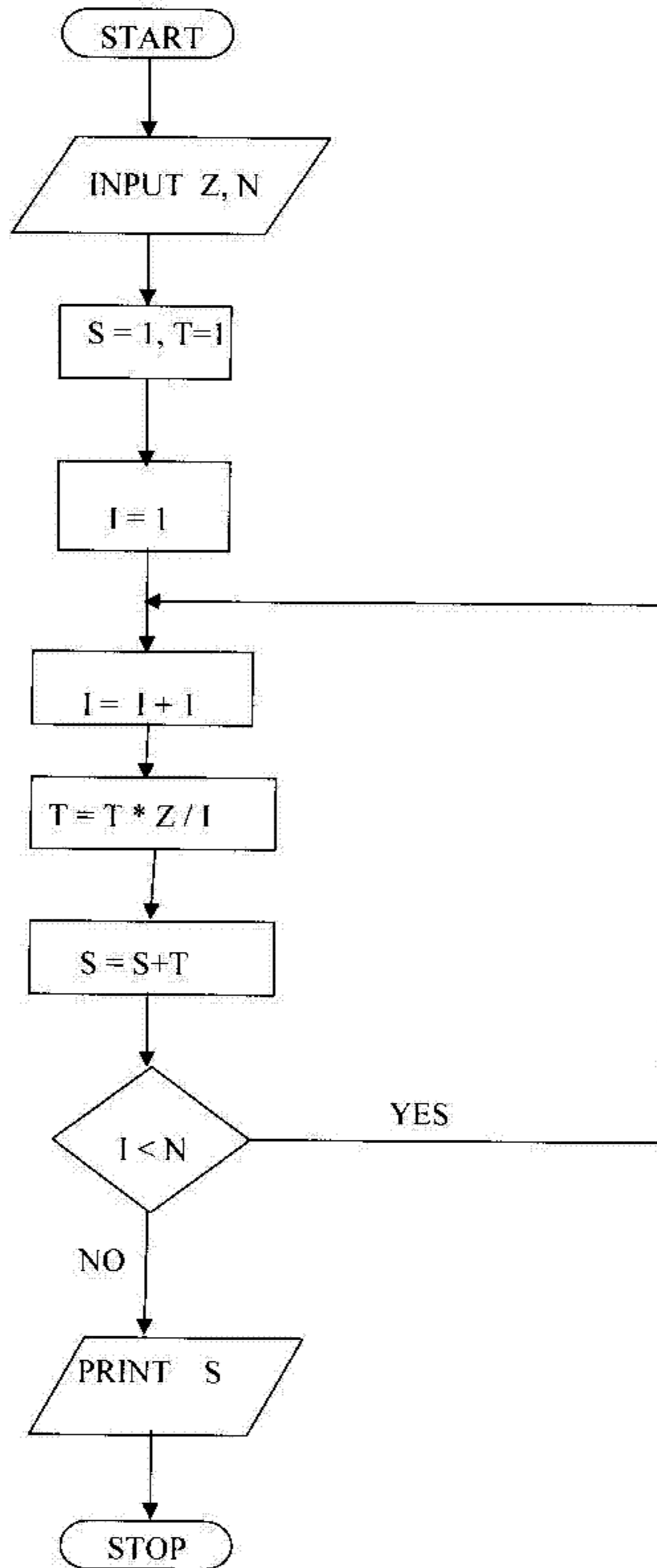
```
10      REM This program is used to compute expansion of  EXP(Z) for first N terms.

20      INPUT " Enter values of  Z,  N  " ; Z ; N

30      S = 1

40      T = 1

50      FOR I = 2 TO N-1

60      T= T * Z / I

70      S = S + T

80      NEXT I

90      PRINT " EXP( " ;  Z ; ")=" ,  S

100     END
```

Question 5 [10 points]:

5.1   Search for the location of Number 2 in the given array.

5.2   The output of the program is 4.

5.3   Number 2 not included in the given array.

(Good Luck)

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مع دعواتي بالتفوق   ....   د . م / كـارم محـمـود