0478

COMPUTER SCIENCE

TOPIC QUESTION PAPER-2 SET- 16

SMART EXAM RESOURCES

Unit 7 Algorithm Design and Problem Solving

1. Read this section of program code that should input 10 positive numbers and then output the smallest number input.

```
1  Small = 0
2  Counter = 0
3  REPEAT
4    INPUT Num
5    IF Num < Small THEN Num = Small
6    Counter = Counter + 1
7    PRINT Small
8  UNTIL Counter < 10
```

There are **four** errors in this code.

Locate these errors and suggest a corrected piece of code for each error.

1.....

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2.....

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3.....

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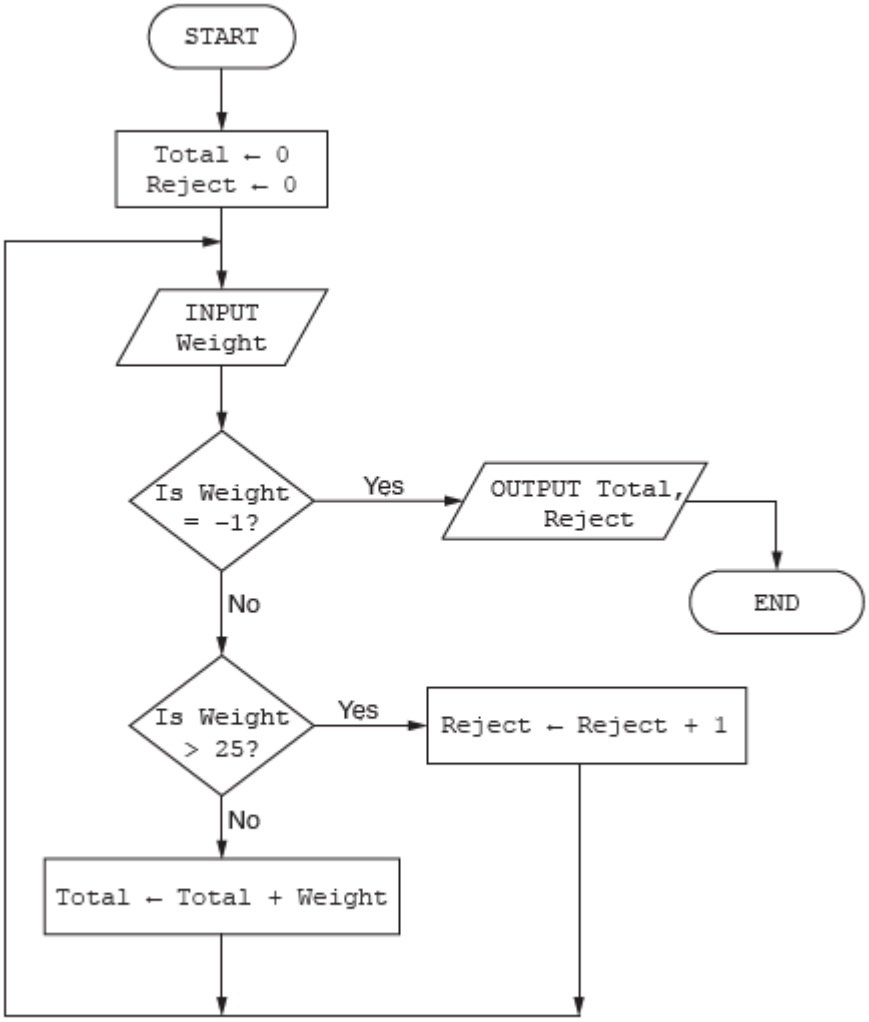
4.....

.....[4]

2. The flowchart below inputs the weight of a number of parcels in kilograms. Parcels weighing more than 25 kilograms are rejected. A value of –1 stops the input.

The following information is output: the total weight of the parcels accepted and number of parcels rejected.



Complete the trace table for the input data:

1.8, 26.0, 7.0, 11.3, 10.0, 2.5, 25.2, 5.0, 19.8, 29.3, –1

Total	Reject	Weight	OUTPUT

[5]

3. Read this section of program code that should input 30 positive numbers and then output the largest number input.

```
1  Large = 9999
2  Counter = 0
3  WHILE Counter > 30
4  DO
5    INPUT Num
6    IF Num < Large THEN Large = Num
7    Counter = Counter - 1
8  ENDWHILE
9  PRINT Large
```

There are **four** errors in this code.

Locate these errors and suggest a corrected piece of code for each error.

1.....

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3.....

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4.....

.....[4]

4. Read this section of program code that should input 50 numbers and then output the average.

```
1  Total = 0
2  For Counter = 1 TO 50
3    INPUT Num
4    Total = Total + 1
5    Counter = Counter + 1
6    Average = Total/Counter
7  NEXT Counter
8  PRINT Average
```

There are **four** errors in this code.

Locate these errors and suggest a corrected piece of code for each error.

1.....

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4.....

.....[4]

5. A routine checks the weight of melons to be sold in a supermarket. Melons weighing under 0.5 kilograms are rejected and melons weighing over 2 kilograms are also rejected.

Give an example of each type of test data for this routine.

Normal
.....

Extreme
.....

Abnormal……[3]