Student Name: _____

Date: 1/12/2022

Times: 50 Minutes

Student Number: _____

Section: _____ 9ةة30 - 5ةه45) انشاء ارباء

الاسم (عربي)_ _ _

o يوسف صلاح          ✓ منال التميمي          o ازدهار جوابره          ضع اشاره بجانب اسم المدرس

o محمد الجعبري          o عليان أبو غربيه

| Question # | 1(10) | 2(12) | 3(8) | 4(10) | Total Grade (40) |
|---|---|---|---|---|---|
| Grade | 5 | 3 | 7.5 | 2 | 17.5 |

## Question 1: Read these sentences carefully and write **T** if the sentence is True or **F** if the sentence is False:

(10 Marks)

| | Questions | T/F |
|---|---|---|
| 1. | Computer program is a collection of instructions that direct the computer to perform a specific task. | T ✓ |
| 2. | Assembly language is a machine-independent language | F ✓ |
| 3. | The Assembler translates a high-level program to its equivalent machine language code | F ✓ |
| 4. | semantic errors are errors that occur at run-time | F ✗ |
| 5. | Number (58) in octal numbering system is a valid number | T ✗ |
| 6. | IPO chart clearly define the Input, Processing, and the Output of a problem | F ✗ |
| 7. | An algorithm is a general description of main steps that solve a problem and include details of the implementation | T ✗ |
| 8. | The maximum value that can be formed from 7 bits is 255 | F ✓ |
| 9. | Debugging is the process of identifying user requirements | T ✗ |
| 10. | You need 8 bits to represent one Hexadecimal digit | F ✓ |

**Question 2: Perform the following conversions:** (12 Marks)

*(Show your work)*

Convert $(11101110)_2 = ($ 238 $)_{10}$

128 64 32 16 8 4 2 1

$128 + 64 + 32 + 8 + 4 + 2$

$128 + 110$

3

1. Convert $(AF)_{16} = ($ 23~~5~~ $)_{10}$

A    F
10   14

8 4 2 1      8 4 2 1
1 0 1 0,     1 1 1 0,
~~8 2 1~~    ~~8 2 1~~
   10          13

2. Convert $(B57)_{16} = ($ 3 $)_8$

B  5  7

8 4 2 1  8 4 2 1  8 4 2 1
1 0 1 1  0 1 0 1  0 1 1 1

1 1 1
3 1 1

3. Calculate

$(110101)_2 + (111110)_2 = ($ 1 1 0 1 0 0 $)_2$

```
  1 1 0 1 0 1
  1 1 1 1 1 0  +
  _____
1 1 0 1 0 0
```

2

**Question 3:** (8 Marks)

Draw a flowchart to read three grades of a student, calculate and print his average,
then print the highest grade.
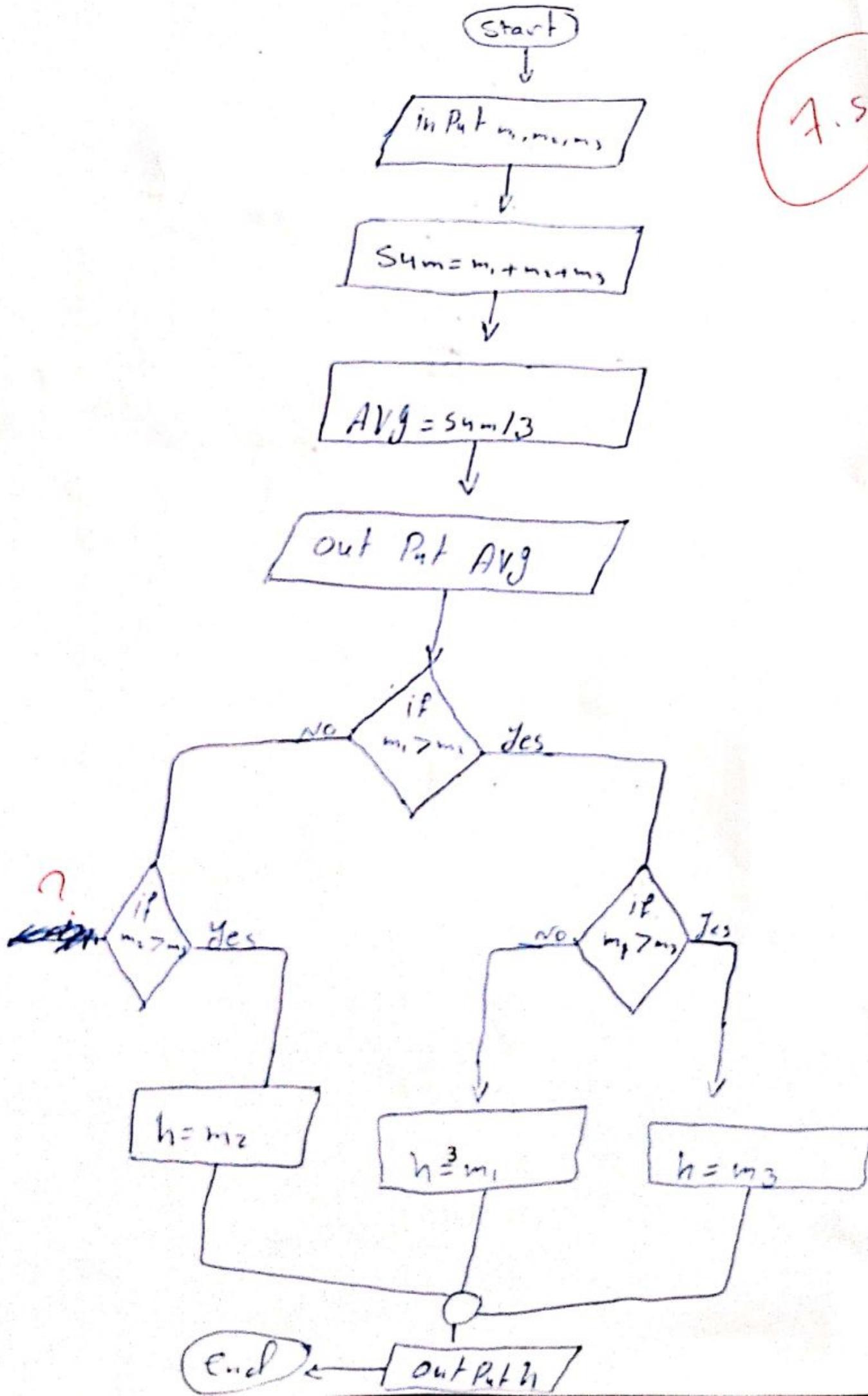
**Question 4:**                                                                    **(10 Marks)**

Draw a flowchart to read 10 numbers, then find the sum of all the numbers divisible

by 5  (مجموع الأرقام التي تقبل القسمه على 5)



4

Good Luck