

Palestine Polytechnic University
College of Information technology and Computer Engineering
Computer Programming Principles 5055
Second Exam A

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Date: 1/12/2022 Student Number: 221113
Times: 50 Minutes Section: اداء / برنامج / حاسب

8:00 - 9:00

ضع اشارة بجانب اسم المدرس ازدهار جوايره منال التميمي يوسف صلاح عتيان أبو غريبه محمد الجعبري

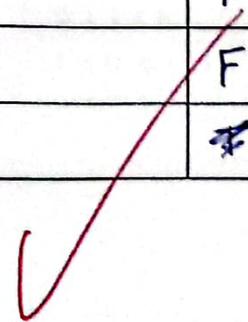
Question #	1(10)	2(12)	3(8)	4(10)	Total Grade (40)
Grade					38

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	T
5.	Number (58) in octal numbering system is a valid number	F
6.	IPO chart clearly define the Input, Processing, and the Output of a problem	T
7.	An algorithm is a general description of main steps that solve a problem and include details of the implementation	F
8.	The maximum value that can be formed from 7 bits is 255 2^7 $2^n - 1$	F
9.	Debugging is the process of identifying user requirements	F
⇒ 10.	You need 8 bits to represent one Hexadecimal digit	F

$$\begin{array}{r} 2^6 \\ 32 \times \\ \hline 64 \times \\ 128 \end{array} \quad 2^7 = 128 - 1$$

1
(A) → 1010



Question 2: Perform the following conversions:

(Show your work)

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

1	1	1	0	1	1	1	0
2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
128	64	32	0	8	4	2	0

2
4
8
16
32
64
128
238

238	119	0
119	59	1
59	29	1
29	14	1
14	7	0
7	3	1
3	1	1
1	0	1

(12 Marks)

- A 10
- B 11
- C 12
- D 13
- E 14
- F 15

1. Convert $(AF)_{16} = (\quad 174 \quad)_{10}$

10	14
A	F
16^1	16^0
160	14

$$\frac{160}{14} = 174$$

174	10	14
10	0	10

AF

2. Convert $(B57)_{16} = (\quad 5527 \quad)_8$

B	5	7
1011	0101	0111
5	5	27

3. Calculate

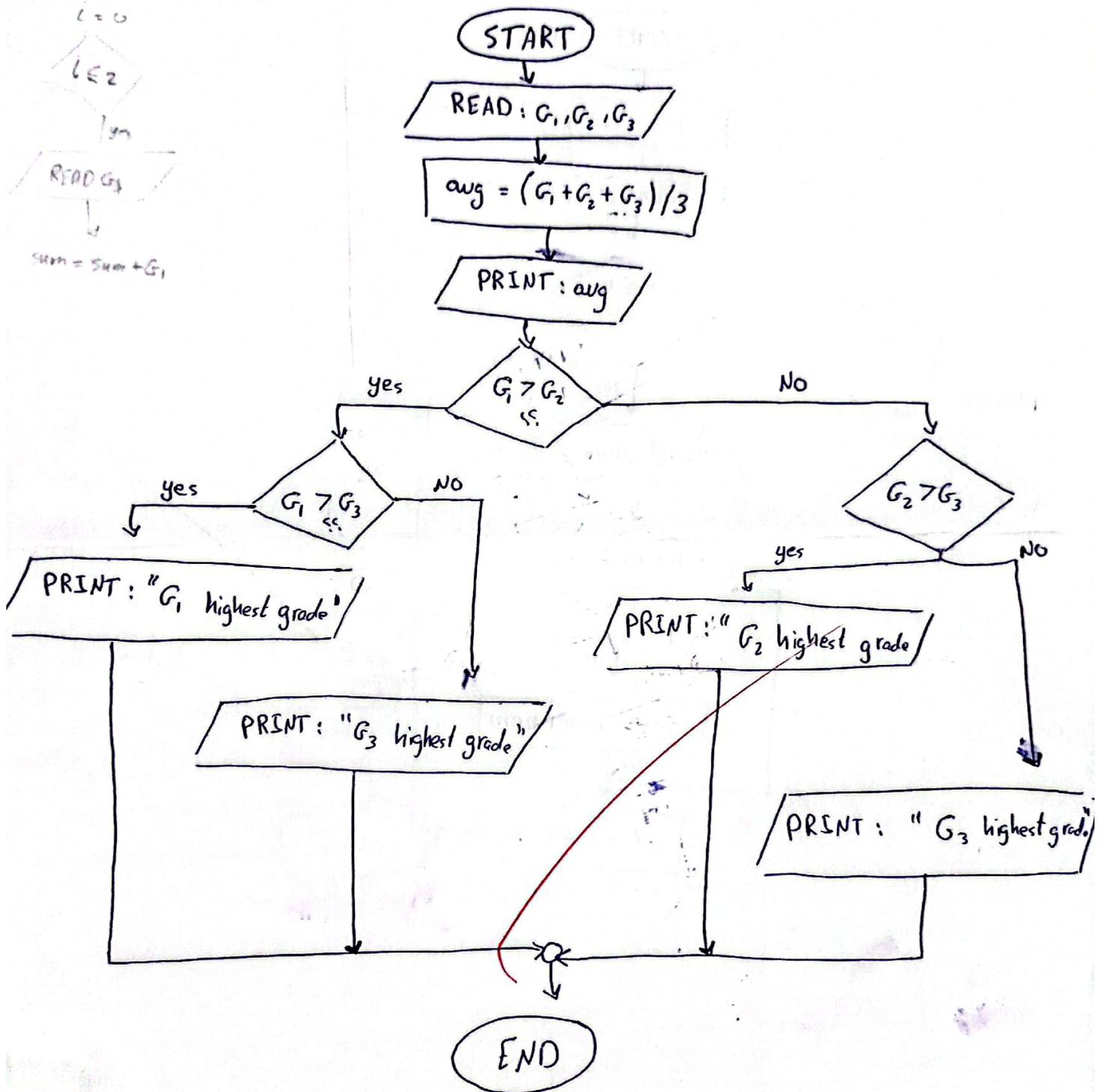
$$(110101)_2 + (111110)_2 = (\quad 1110011 \quad)_2$$

$$\begin{array}{r} 111 \\ 110101 \\ + 111110 \\ \hline 1110011 \end{array}$$

Question 3:

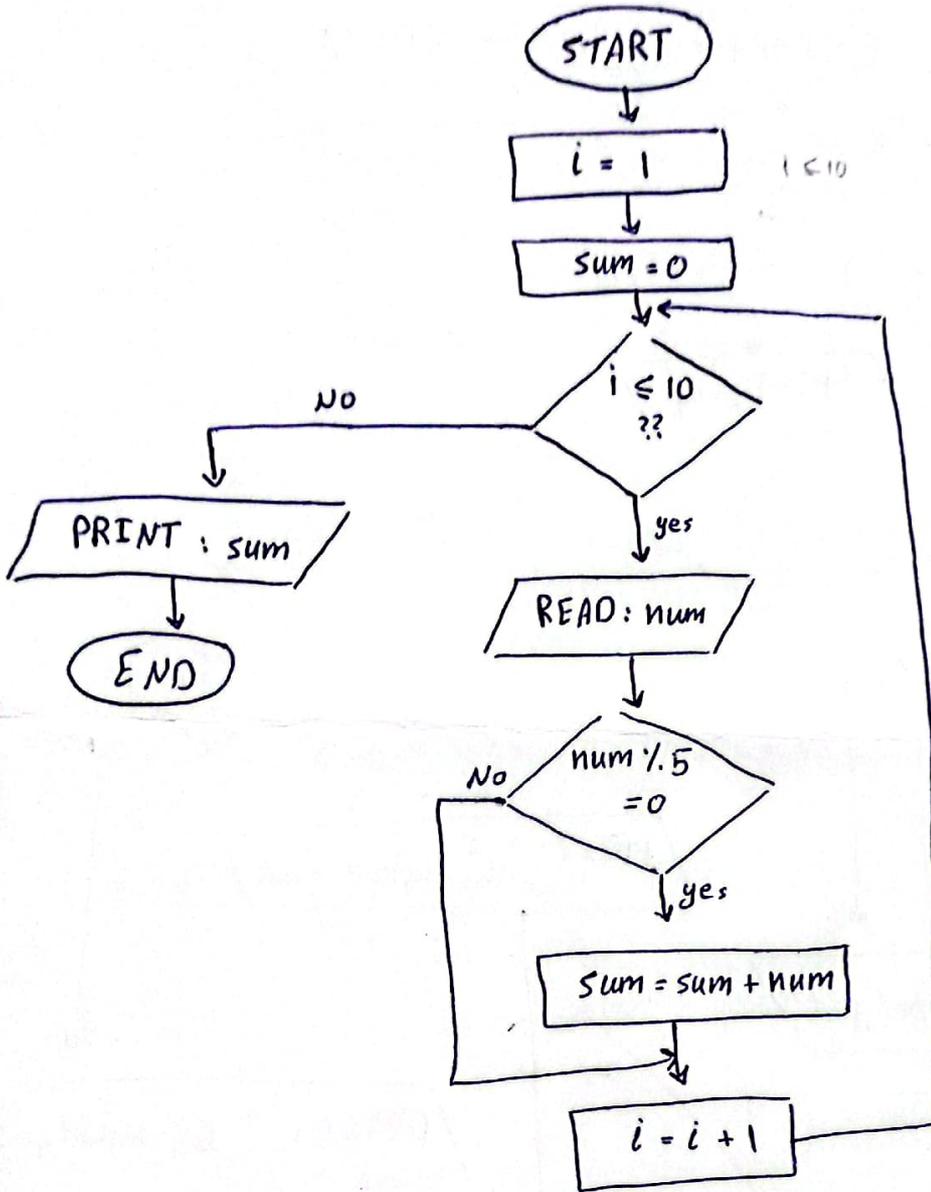
(8 Marks)

Draw a flowchart to read three grades of a student, calculate and print his average, then print the highest grade.



Question 4:

Draw a flowchart to read 10 numbers, then find the sum of all the numbers divisible by 5 (مجموع الأرقام التي تقبل القسمة على 5)



Good Luck