

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

Second Exam

Student Name: _____
Date: 1/12/2022
Times: 50 Minutes

الاسم (عربي): _____
Student Number: _____
Section: _____

يوسف صلاح مثال التميمي ازدهار جوايره ضع اشاره بجانب اسم المدرس
محمد الجعبري عليان أبو غريبه

Question #	1(10)	2(12)	3(8)	4(10)	Total Grade (40)
Grade					37

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	F
9.	Debugging is the process of identifying user requirements	F
10.	You need 8 bits to represent one Hexadecimal digit	T

Question 2: Perform the following conversions:

(12 Marks)

(Show your work)

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

$$(0 \times 2^0) + (1 \times 2^1) + (1 \times 2^2) + (1 \times 2^3) + (0 \times 2^4) + (1 \times 2^5) + (1 \times 2^6) + (1 \times 2^7)$$

$$0 + 2 + 4 + 8 + 0 + 32 + 64 + 128$$

$$6 + 8 + 32 + 64 + 128$$

1. Convert $(AF)_{16} = (175)_{10}$

F-15 A-10

$$(15 \times 16^0) + (10 \times 16^1) = 15 + 160$$

$$= 175$$

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

Hexa \rightarrow Binary \rightarrow Octal

$$\begin{array}{ccc} B & 5 & 7 \\ \downarrow & \downarrow & \downarrow \\ 1011 & 0101 & 0111 \\ \hline & & = 5527 \end{array}$$

3. Calculate

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

~~110011~~ $)_2$
110011

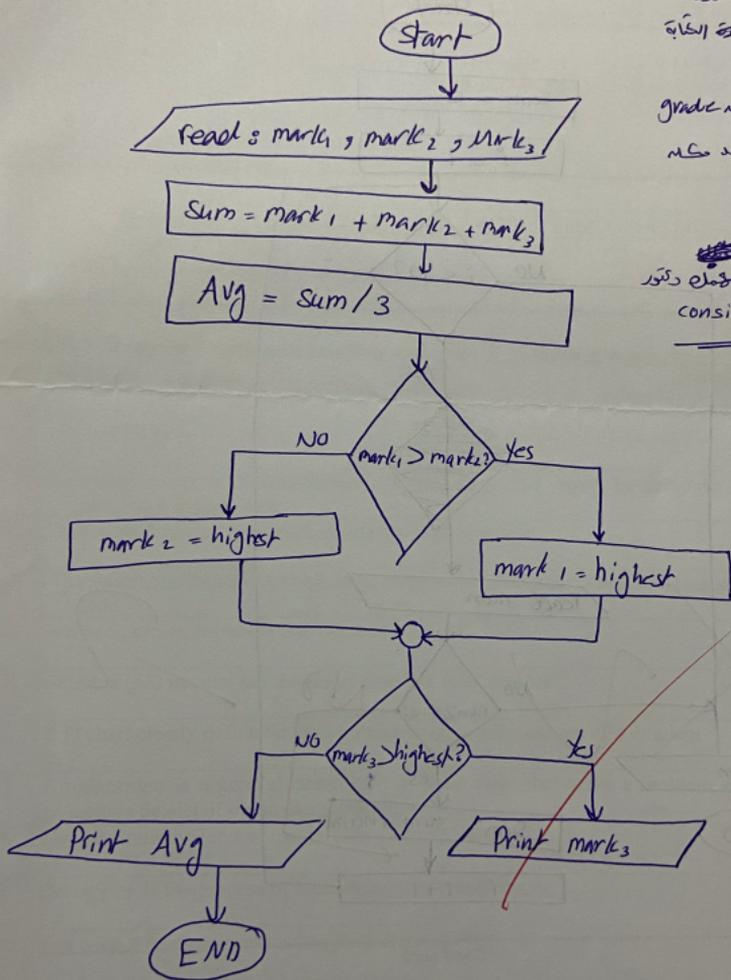
2

$$\begin{array}{r} 11 \\ 11 \\ 11 \\ 0 \\ \hline 110011 \end{array} +$$

Question 3:

(8 Marks)

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



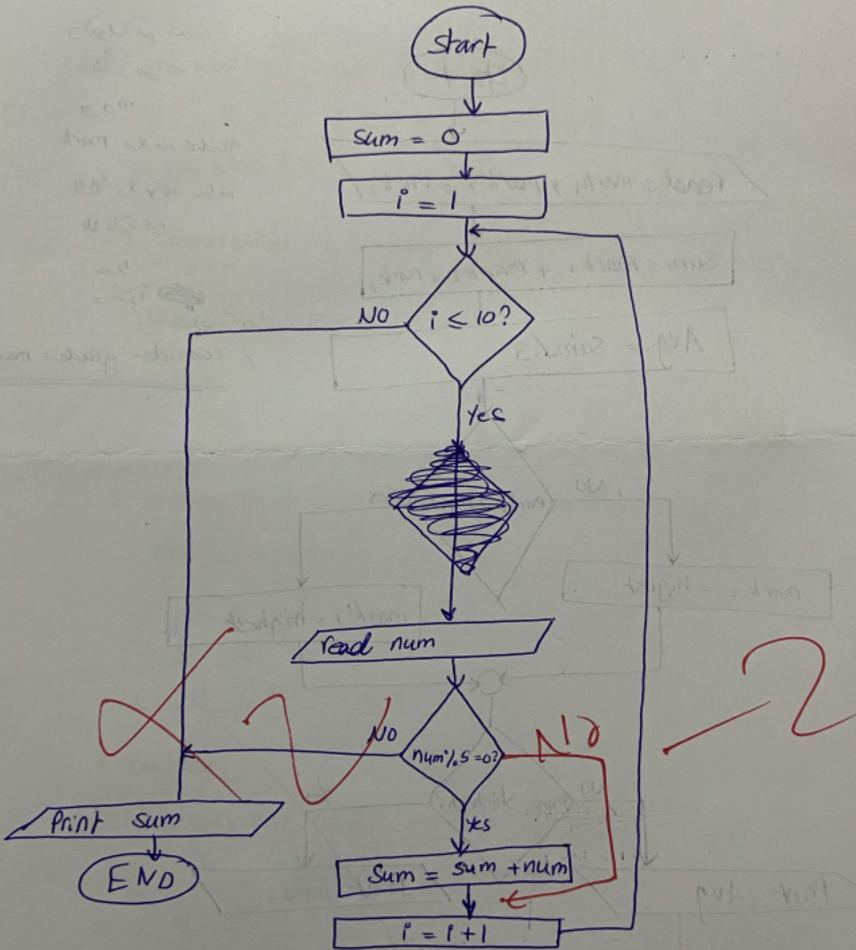
Note

دكتور تم حساب
هذا في الكافة
ووسط
grade بلامه mark
بالتالي اذا كان
للحالة فيه
عدلاً
ونكره
لتفصيل دكتور
consider grade = mark

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 القسمة على 5)



Good Luck