



Final Exam

Computer Programming

Time Allowed: 2 Hrs.
CIE, BME Students.
Total Marks: 50
2017 – 2018



يسمح باستخدام القلم الرصاص (شرط وضوح الخط).

Collect **50** marks.

حاول تجميع **50** درجة من الاسئلة التالية .

(1) **Write** a program to **Enter** the student degrees in **any number of subjects**, then prints his **grade**. The user is not allowed to enter wrong degree also, no grade if the student failed in any subject. (8 marks)

(2) **Using for loop**, write a program to:

- Calculate X^Y
- Calculate the factorial of a number $N!$
- Enter the elements of $A(10)$, then calculate the sum of elements. (12 marks)

(3) **Write a function** to accept the worker type, work hours, and absence days, then returns his net salary using the following table. (8 marks)

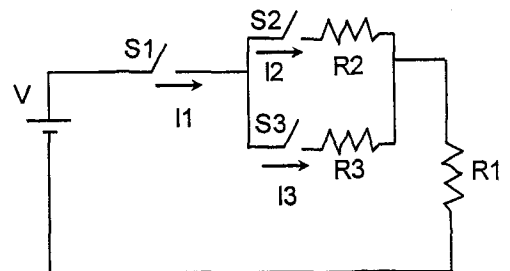
Type	Hour Price	Tax	Over	Money per absence day
1	10 \$	2%	100 \$	10 \$
2,3	20 \$	5%	150 \$	10 \$
4	40 \$	7%	200 \$	20 \$
5	50 \$	10%	250 \$	30 \$

(4) **Calculate** the final price of a TV according its **type** (colored or not) and **size** after applying a discount and adding a transportation cost **تكاليف النقل** as shown in the next table. (8 marks)

Type	Size	Discount	Transportation cost
1	$20 > \text{size}$	3%	10 \$
	$20 \leq \text{size} < 30$	5%	15 \$
	$30 \leq \text{size}$	7%	20 \$
2	$20 > \text{size}$	10%	22 \$
	$20 \leq \text{size} < 30$	12%	25 \$
	$30 \leq \text{size}$	15%	40 \$

(5) **Write** the code for the following simulator, you should enter the values of R_1 , R_2 , R_3 , V , and the state of the switches S_1 , S_2 , S_3 , then show the values of the currents I_1 , I_2 , and I_3 .

(8 marks)



(6) **Using Select Case**, write a program for a simple calculator that performs the basic arithmetic operations (+, -, *, /). Note: the division by zero is not allowed.

(6 marks)

(7) **Write** the code for the following application that represents a simple calculator

(5 marks)

The screenshot shows a window titled 'X' containing a simple calculator interface. It has three input fields labeled 'First No.', 'Second No.', and 'Result'. Below the input fields are four buttons for arithmetic operations: '+', '-', '*', and '/'. At the bottom of the window are two buttons labeled 'Clear' and 'Close'.

(8) **Write** the code for the following application that represents a simple converter.

(5 marks)

The screenshot shows a window titled 'X' containing a simple unit converter interface. It has four input fields labeled 'CM', 'Inches', 'Yards', and 'Meters'. At the bottom of the window are three buttons labeled 'Convert', 'Clear', and 'Close'.

----- End of Questions -----

With Best Wishes
Prof. Dr: Ahmed Saleh
Plz, send feedback about the exam to:
aisaleh@yahoo.com