Benha University Faculty of Engineering (at Shoubra) Electrical Engineering Department Preparatory year Attempt *all* the following questions:		**Midterm Exam 'B'** **Subject:** Computer - ECE 001 **Date:** Thursday 31/03/2016 **Duration:** 1 hour **№ of Questions:** 4 in 2 page(s) **Total Mark:** 15

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Question 1: (4 Marks)

Celsius to Fahrenheit Temperature Converter:

Write a complete C++ program that converts Celsius temperatures to Fahrenheit temperatures. The formula is as follows:
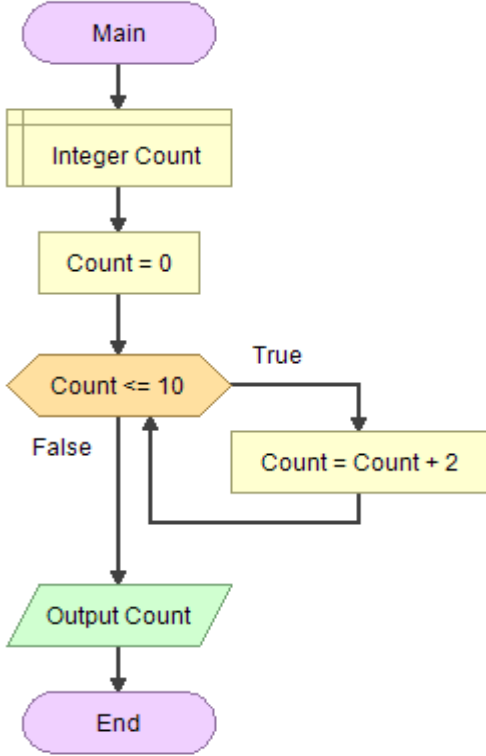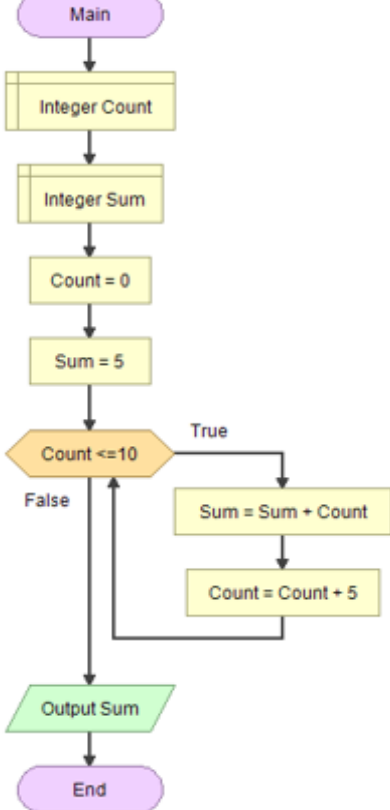
$$F = C \times 9/5 + 32$$

The program should ask the user to enter a temperature in Celsius, and then display the temperature converted to Fahrenheit.

Question 2: (4 Marks)

Determine the output of the following flowcharts:

a) (2 Marks)	b) (2 Marks)
Answer	**Answer**

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Question 3:   (3 Marks)

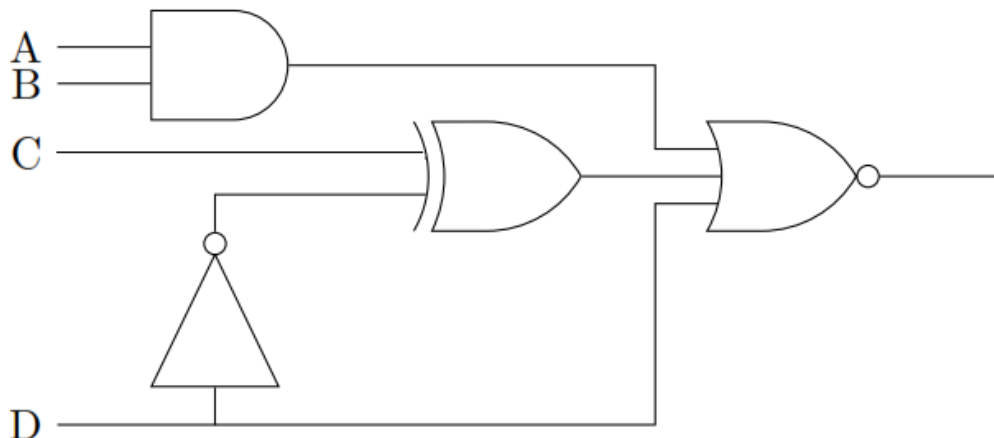### *Choose the best answer:*

1. The value $(101011)_2$ in a decimal system is
(a) 43   (b) 42   (c) 44   (d) A4

2. The value $(245)_8$ in a decimal system is
(a) 165   (b) 101100101   (c) 69   (d) A5

3. The value $(74)_{10}$ in a hexadecimal decimal system is
(a) 104   (b) 740   (c) 4A   (d) A4

4. A scanner is an example of a(n) ………………………..
(a) processing device   (b) output device   (c) storage device (d) input device

5. A touchscreen device is an example of a(n) ………………………..
(a)processing device (b)output device (c)storage device (d)input/output device

6. The last step in the machine cycle is ……………………………
(a) fetch   (b) execute   (c) decode   (d) store

Question 4:   (4 Marks)

State the Boolean expression and the truth table of the following logic circuit:

Good Luck
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