

**HALF YEARLY EXAMINATION – 2015/2016**

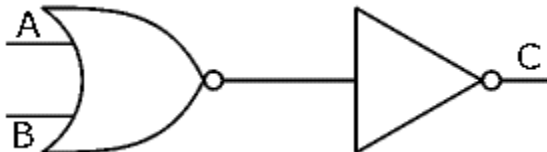
Level 5 – 6 – 7 – 8

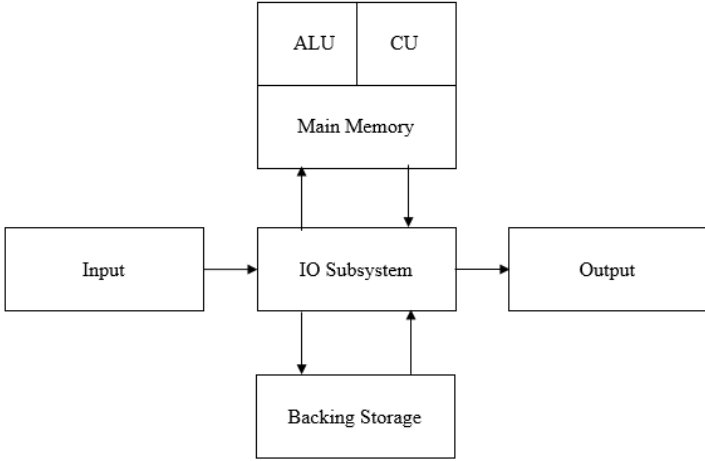
Form 4

COMPUTING Marking Scheme

TIME: 1h 30min

[illegible]

	<p>ci. C = OR Q = NOT Z = AND</p> <p>cii.</p> <table><tr><th>A</th><th>B</th><th>C</th><th>P</th><th>Q</th><th>Z</th></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td></tr></table> <p style="text-align: center;">Logic 1 = True Logic 0 = False</p> <p>ciii. The output Z is true when <u>both A and B are false</u>.</p> <p>civ.</p> <div></div>	A	B	C	P	Q	Z	0	0	0	1	1	1	0	1	1	0	0	0	1	0	1	0	1	0	1	1	1	0	0	0	<p>1 each</p> <p>0.5 each column</p> <p>1</p> <p>1 for OR</p> <p>1 for NOT</p> <p>1 for complete circuit</p>	
A	B	C	P	Q	Z																												
0	0	0	1	1	1																												
0	1	1	0	0	0																												
1	0	1	0	1	0																												
1	1	1	0	0	0																												
4	<p>a. i. 00000011 ii. 01000011</p> <p>b. ASCII stands for American Standard Code for Information Interchange. [1] It is a standard 7 bit character coding system used to achieve compatibility between various computers. [1]</p> <p>c. UNICODE</p> <p>d. 6 bits</p>	<p>1 each</p> <p>2</p> <p>1</p> <p>1 for addition</p> <p>1 for conversion</p> <p>1 for correct answer</p>	8																														

5	<p>a.</p>  <p>b.</p> <p>ALU – Arithmetic Logic Unit CU – Control Unit IR – Instruction Register PC – Program Counter</p> <p>c. machine code, opcode, CPU, operands, fetch-execute, counter, address, data, instruction, executed</p> <p>d. Register is a small sized, high speed, temporary storage location inside the CPU.</p> <p>e. Accumulator</p> <p>f. Accumulator is the place where arithmetic and logic operations take place and which holds results temporarily.</p> <p>g. Program Counter OR Instruction Register</p> <p>h. Program Counter shows the address of the next instruction to be executed. OR Instruction Register holds the instructions currently being executed.</p>	<p>0.5 each</p> <p>0.5 each</p> <p>0.5 each</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	15
6	<p>a. Computers understand only machine code</p> <p>b. i. 11100100 ii. 10011100</p> <p>c. 01111111</p> <p>d. 127</p> <p>e. 10000000</p> <p>f. -128</p> <p>g. 10101100 (1 – conversion, 1 – two’s compl. , 1 – add, 1 – double checking)</p>	<p>1</p> <p>2</p> <p>1</p> <p>2</p> <p>1</p> <p>2</p> <p>4</p>	15

7	<p>a. ii. Process for planning, creating, testing and deploying a system</p> <p>b. 4, 7, 1, 6, 2, 5, 3 (from top to bottom)</p> <p>c.</p> <p>i. Programming and Documentation ii. Programming and Documentation iii. Implementation and Changeover methods iv. Project Selection and Feasibility Study v. Present System Study and Analysis vi. Implementation and Changeover Methods vii. Control and Review</p>	<p>1</p> <p>7</p> <p>1 each</p>	15
8	<p>a.</p> <p>i. Part1_2 ii. Main Method iii. Float and double iv. (two out of...) km, liters, kpl v. Lines 12, 14, 20 vi. Lines 1, 7, 16</p> <p>b.</p> <p>i. A = A + 1; OR A++; ii. System.out.print ("Monica "); System.out.print("Bonello"); iii. int num1 = 26; iv. String word = "Computing"; (students have to give a variable name!)</p> <p>c.</p> <pre>public class Exam { public static void main (String args[]) { System.out.println("Name\t Alan"); System.out.println("Surname\t Bartolo"); System.out.println("Age\t 14"); System.out.println("DOB\t 26th October 2001"); } }</pre>	<p>1 each</p> <p>1 each</p> <p>5</p>	15

- 1 mark – correct class declaration
- 1 mark – correct main method declaration
- 1 mark – correct syntax throughout (i.e. correct capitalisation and use of ; { }, “”)
- 1 mark – correct use of escape character \t
- 1 mark – use of System.out.**println** to start new line