Computer Programming

I. Demonstrate knowledge of computer programming.

Tasks Instructions:

Each number to the right refers to a single student/candidate (1-10). Place a check (√) in the respective column for the appropriate student/candidate number (1-10) if the skills listed below are observed as stated. Leave blank if not observed. Student/candidate will only get credit for the skills they have demonstrated.	1	2	3	4	5	6	7	8	9	10
Explain how programs and programming languages work										
Describe the purposes and practices of structured programming										
Safety and infection control are adhered to during all aspects of this task.										
The student completed task within the time limited.										
Points earned										
Total possible points (4)										

II. Perform competencies related to Java programming.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Explain the structured programming paradigm										
Identify the primary components of a Java program										
Explain the basic syntax of a Java program										
Demonstrate procedures for compiling and running a Java application										
Demonstrate the use of Java's online hypertext technology documentation										
Demonstrate the use of Java's identifiers to name variables, constants, and										

methods										
Demonstrate the use of Java's operators to write expressions										
Explain the rules governing operand evaluation order and operator precedence										
Summarize Java's variable naming conventions										
Distinguish syntax errors, runtime errors and logic errors										
Understand program flow control in selection and loop statements										
Demonstrate the use of methods in Java										
Demonstrate the use of declaring, initializing and accessing elements in arrays										
Demonstrate the use of the string class to process fixed strings										
Safety and infection control are adhered to during all aspects of this task.										
The student completed task within the time limited.										
Points earned										
Total possible points (16)										

III. Perform competencies related to C++ programming.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Write C++ programs using input/output statements										
Write C++ programs using selection and iteration										
Create C++ programs using functions										
Write C++ programs using one-dimensional arrays										
Properly document and debug C++ programs										
Create object concepts and terminology										
Implement those algorithms in the C++ programming language using classes										
Debug C++ programs written by others										

	1	2	3	4	5	6	7	8	9	10
Use pointers in C++ programs										
Use sequential files in C++ programs										
Safety and infection control are adhered to during all aspects of this task.										
The student completed task within the time limited.										
Points earned										
Total possible points (12)										

IV. Perform competencies related to Visual Basic programming.

Tasks Instructions:

	1	2	3	4	5	6	7	8	9	10
Demonstrate knowledge of the fundamentals of Visual Basic (VB) programming using Visual Basic.NET										
Use Sequential and random access files in VB programs										
Use advanced controls and multiple controls in a business application										
Use a database and database controls in a business application										
Demonstrate knowledge of structured and object-oriented programming techniques through the process of subprograms, selection, and repetition in projects										
Use GUI design principles in all projects										
Safety and infection control are adhered to during all aspects of this task.										
The student completed task within the time limited.										
Points earned										
Total possible points (8)										
Total points earned for all sections (A)										
Total possible points for all sections (B) 40										
Student/candidate score (divide A/B)										