

**Central Peel Secondary School**  
**Grade 12 Computer and Information Science Final Exam**

Mr. N. Nolfi

Victim: \_\_\_\_\_

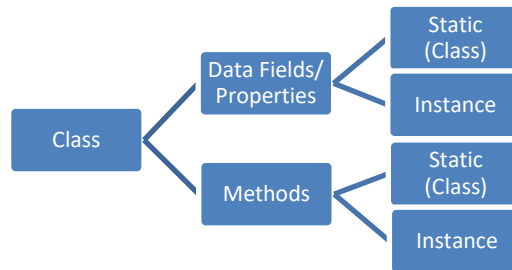
KU	APP	TIPS	COM
/20	/20	/20	/20

Number of Pages: 6

Time: 2 hours

**Section One: Multiple-Choice Questions dealing with Object-Oriented Programming**

The following diagram shows the *basic* structure of a class in object-oriented programming. After studying the diagram, answer the multiple choice questions found below.



For questions 1 to 10, select the *best* answer. Write the letter of your choice in the blank space. **(10 KU)**

**Section Two: Written Responses**

11. Given the *values* of the *variables* shown below, describe the *problem solved* by each of the given C# *program snippets*. Note that variables have intentionally been given cryptic names. (In case you have forgotten how the “Substring” method works, a description of it is given at the bottom of this page.) This is a MEMORY MAP question. **(10 KU, 5 TIPS, 5 COM)**
12. Recall that a *palindrome* is any string (including any word or number) that is unchanged when the sequence of characters in the string is reversed. Examples of palindromes include “bob,” “dad,” “1001,” and “radar.” The following C# methods for working with strings will help you solve the problem described below: **(10 APP, 5 COM)**
13. In this question you will make modifications to the Mandelbrot set program to produce the picture shown at the right. This picture is produced by colouring the exterior of the Mandelbrot set using a method known as “?????”. **(5 APP, 5 TIPS, 5 COM)**
14. ??? and ???, along with several other masters of duelling, have made it to the World Cup of Yu-Gi-Oh, a championship tournament that is structured in the following way:

**Round Robin:** Each contestant plays against every *other* contestant exactly *once*. Shown below is an example of the how the matchups could be organized in a ten-player round robin: **(10 TIPS, 5 COM)**

Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7	Round 8	Round 9
1   10 2   9 3   8 4   7 5   6	1   2 3   10 4   9 5   8 6   7	1   3 4   2 5   10 6   9 7   8	1   4 5   3 6   2 7   10 8   9	1   5 6   4 7   3 8   2 9   10	1   6 7   5 8   4 9   3 10   2	1   7 8   6 9   5 10   4 2   3	1   8 9   7 10   6 2   5 3   4	1   9 10   8 2   7 3   6 4   5