**Multiple Choice [5 Marks]**

Circle the best answer from the choices for each question below:

1. Which of the following steps is not part of the Software Design Lifecycle?
2. Planning
3. Design
4. Testing
5. Marketing
6. What is the main purpose of the Analysis phase of the Software Design Lifecycle?
7. Create test cases to identify “bugs” in the program
8. Collect user feedback about the operation of the program
9. Design interfaces and split the project into programming tasks
10. Collect requirements and other information about the project
11. In which phase of the Software Design Lifecycle would you identify new skills that would be needed for tour team members?
12. Planning
13. Design
14. Implementation
15. Maintenance
16. In which of the following language features is not specifically related to object oriented programming?
17. Classes and Interfaces
18. Constructors and Methods
19. Inheritance
20. Local and Global Variables
21. In the Java SWT framework, which object controls the opening and closing of the application window?
22. Display() object
23. Shell() object
24. Spinner() object
25. Button() object

**Day 2 Task – Object Oriented Programming [10 Marks]**

1. Using the Java SWT framework, write a program to do the following:
   1. Add a spinner, list and text box to a display window.
   2. The list should contain the options “factorial”, “square”, “square root”.
   3. Read the value of the spinner and the list and calculate the indicated math function.
   4. Display the result in the text box.
   5. Marks will be provided for origination of widgets in your GUI and appropriate use of strings, titles, prompts, tool tips, etc.
   6. Marks will be provided for appropriate use of object-oriented programming conventions.
2. Upload your program file(s) to your GitHub repository:
   1. Provide the URL of your files below .

**Day 2 – SDLC Reflection [8 Marks]**

Note: Each question is worth 4 marks. 2x4marks = 8 marks.

1. Reflect on the Testing Phase of the Software Development Life Cycle.
   1. List the most important objective of this phase.
   2. Provide an example of a test case.
   3. Explain when test cases should be executed during the SDLC.
   4. Explain what should happen if a test case is failed.
2. Reflect on the Delivery Phase of the Software Development Life Cycle.
   1. Specifically identify and explain the two (2) most important things you or your team had to consider when delivering the 3D Tic-Tac-Toe game to the Grade 11 students.

**Day 1 – Short Answer Questions [8 Marks]**

Note: Each question is worth 4 marks. 2x4marks = 8 marks.

1. Compare and Contrast Java Eclipse and Unity with respect to their support for object oriented programming.
   1. Provide an example of and explain two (2) key features of object oriented programming supported by the Java Eclipse development environment.
   2. Provide an example of and explain one (1) key feature of object oriented programming supported by the Unity development environment.
   3. Explain how Java Eclipse and Unity take a different approach to object oriented programming.
2. Provide a specific example and explain your example for each of the following topics related to the safe use of computer technology.
   1. How personal files and programs can be attacked by computer malware.
   2. What you can do to protect personal files and programs from malware attacks.
   3. How personal identity information can be attacked by computer malware.
   4. What you can do to protect personal identity information from malware attacks.

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