W3101 Scripting Languages — Javascript Midterm exam Apr 01, 2009

Name: Student Id:

---

1. What is the difference between private members and privileged members of Javascript? Explain how they restrict access and give privileges to internal (data and functional) members and external variables and functions. ... (2 marks)

2. Give the definition for two objects, "employee" and "executive" such that ... (4 marks)

   (a) employee is the parent and executive is the child.

   (b) Define a private member called "name" in employee.

   (c) Define a privileged function called "getSalary( )" in employee that returns some constant value — $s1$, which is the salary of the employee. Define another privileged function called "getSalary( )" in executive that returns some constant value — $s2$, which is the salary of the executive.

   (d) Explain precisely how Javascript is enforcing OOP concepts, specifically data encapsulation, inheritances and polymorphism with respect to this example.

3. Answer the following questions briefly and precisely:

   (a) Javascript events — what are they, why are they useful? ... (1 mark)

   (b) List at least 6 Javascript events and say when they are invoked.

   (c) Show how you would use any one of your favorite Javascript events in a small code segment. (If you plan to call a function, you can assume the function exists; you don't have to write the code for the function). ... (1 mark)

   (d) Write a small program that checks if a broswer supports Javascript or not. If it does not support Javascript, it should ask the user to use a different browser. ... (1 mark)

4. What does the "===" operator in Javascript do? Is it the same as "==" operator? If not, clarify. What is the output of following code segment: ... (3 marks)

5. Write a Javascript program/function that shows the numbers [1-10] in an alert box, one after another sleeping for 100, 200, ..., 900 msecs. That is, when the program starts, it should show "1". Then it should sleep for 100 msec. and show "2", sleep for 200 msec. and show "3" and so on, finally showing "10" before returning. ... (2 marks)