EEE4084F Quiz 3: Lectures 10-13

STUDENT NUMBER: _____

PLEASE ANSWER IN SPACE PROVIDED OR ON SEPARATE PAGE

MAKE SURE YOUR STUDENT NUMBER IS ON YOUR ANSWER PAGE(s)

TOTAL NUMBER OF QUESTIONS : FIVE

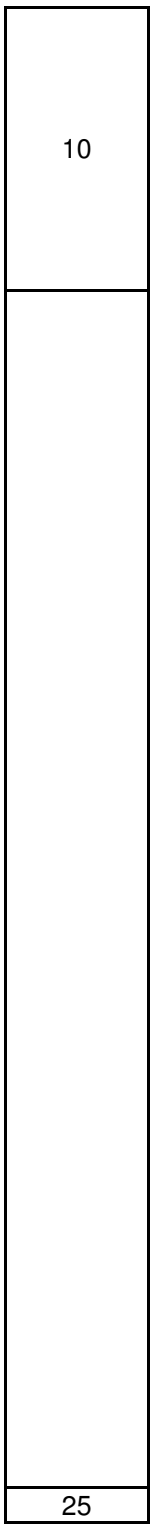
#	Question
Q1	Explain the difference between barrier and locking synchronization. Include a short example to aid your explanation.
Q2	The StdC library includes a function that returns the number seconds (in millisecond resolution) from 00h00 1 January 1970. What is the name of the function? Circle the correct option below: (a) getthetime (b) getclocktime (c) getdate (d) gettimeofday (e) gettimeval
Q3	Which option below most accurately defines the concept of a program design pattern? (a) A code file template that can be modified for inclusion into a program. (b) A general reusable solution to a commonly occurring software design problem. (c) An existing design that can be manipulated to fit into a program design. (d) A partly complete program specification that provides a starting point for a wide range of possible applications. (e) A cycle of reuse activities by which a program is built from increasingly complex parts.
Q4	Discuss two major challenges associated with the development of applications for reconfigurable computers [2 marks]. Name a technology that may assist with one (or both) of these challenges [2 marks].

Q5	(a) Briefly explain the 'replicate and reduce' design pattern [4 marks]. (b) Consider that you were assigned to implement a simple database quary routine that involves searching for a specific text string within a large table, as per the SQL command: `SELECT COUNT(name) AS 'Num orders' FROM orders WHERE name='Bob';` Explain why the replicate and reduce design pattern would likely provide poor performance for implementing such a program [3 marks]. What parallel programing design pattern would you recommend for this problem; briefly motivate your answer? [3 marks]
	Answer to (a): Answer to (b):
	TOTAL :

13-Apr-11

time(min):

Marks
5
3
3
4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