

**Santa Clara University**  
Department of Computer Engineering  
Advanced Operating Systems (COEN383 – Sect-1) – Final Grading (35 points)  
Answer All Questions  
**Time: 90 minutes**

Name: Benita Rego

- Q1 [6 pts]: received 6 pts
  - a) received (3/3):
  - b) received (3/3):
  
- Q2 [6 pts]: received 6 pts
  - a) received (3/3):
  - b) received (3/3):
  
- Q3 [5 pts]: received 3.5 pts
  - a) received (2/2):
  - b) received (1.5/3): Condition variable is used to let a thread to wait/sleep until some condition is met. Typically processes will use combination of mutex and condition variable together. Also, can mutex perform both functions?
  
- Q4 [6 pts]: received 6 pts
  
- Q5 [6 pts]: received 4 pts
  - a) received (1/1.5): It does not display the file's line count. Instead it displays the number of lines in the file that include the string “nd”.
  - b) received (1.5/1.5):
  - c) received (0/1.5): Zombie is a process that completed execution but still holding its resources waiting for the parent to free these resources. The answer is yes, it is a good idea to free memory of zombie process.
  - d) received (1.5/1.5):

- Q6 [6 pts]: received 6 pts
  - a) received (3/3):
  - b) received (3/3): YARN supports multiple applications frameworks executing in parallel instead of only M/R framework

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Total = (31.5/35)