

COMP3520 Operating Systems Internals

Assignment 2

Part 2 Marking Scheme

Discussion Document

Each question is allocated a set number of points, reflecting its relative importance. The total number of points that you obtain is your concepts performance score.

Question 1a

Criteria	Points
<ul style="list-style-type: none"> Provide a valid explanation of the operation of the Fair-Share Scheduling scheme 	2
<ul style="list-style-type: none"> Provide some key characteristics and / or features of the Fair-Share Scheduling scheme <p>OR</p> <ul style="list-style-type: none"> Repeat relevant material verbatim or near-verbatim from a cited or referenced reliable source AND Address the requirements of the question 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 1b

Criteria	Points
<ul style="list-style-type: none"> Discuss potential advantages and potential disadvantages of the Fair-Share Scheduling scheme 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 2

Criteria	Points
<ul style="list-style-type: none"> Discuss the calculations of quantum values for all different situations 	2
<ul style="list-style-type: none"> Discuss the calculations of quantum values for some situations 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 3a

Criteria	Points
<ul style="list-style-type: none"> Give correct average turnaround time and average waiting time for all time quanta 	2
<ul style="list-style-type: none"> Give average turnaround time and average waiting time for all time quanta with at most two incorrect values 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 3b

Criteria	Points
<ul style="list-style-type: none"> Compare the performance results with an in-depth analysis Describe and relate implications in terms of performance characteristics with clear justification 	3
<ul style="list-style-type: none"> Provides a substantial comparison of the performance results Describes some implications in terms of performance characteristics with justification 	2
<ul style="list-style-type: none"> Provides a limited comparison of performance results Makes general statements about Round Robin Dispatcher in the light of the results 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 4a

Criteria	Points
<ul style="list-style-type: none"> Give correct average turnaround time and average waiting time for all time quanta 	2
<ul style="list-style-type: none"> Give average turnaround time and average waiting time for all time quanta with at most two incorrect values 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 4b

Criteria	Points
<ul style="list-style-type: none"> Compare the performance results with an in-depth analysis Describe and relate implications in terms of performance characteristics with clear justification 	3
<ul style="list-style-type: none"> Provides a substantial comparison of the performance results Describes some implications in terms of performance characteristics with justification 	2
<ul style="list-style-type: none"> Provides a limited comparison of performance results Makes general statements about Round Robin Dispatcher in the light of the results 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 5a

Criteria	Points
<ul style="list-style-type: none"> Give correct average turnaround time and average waiting time for all time quanta 	2
<ul style="list-style-type: none"> Give average turnaround time and average waiting time for all time quanta with at most two incorrect values 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 5b

Criteria	Points
<ul style="list-style-type: none"> Compare the performance results with an in-depth analysis Describe and relate implications in terms of performance characteristics with clear justification 	3
<ul style="list-style-type: none"> Provides a substantial comparison of the performance results Describes some implications in terms of performance characteristics with justification 	2
<ul style="list-style-type: none"> Provides a limited comparison of performance results Makes general statements about Round Robin Dispatcher in the light of the results 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 6

Criteria	Points
<ul style="list-style-type: none"> Provide a substantial comparison of the First Come First Served, and Round Robin scheduling schemes List at least two situations in which FCFS scheme performs better and at least two situations in which RR scheme performs better with clear justification 	5
<ul style="list-style-type: none"> Provide a substantial but incomplete comparison of the First Come First Served, and Round Robin scheduling schemes List at least two situations in which FCFS scheme performs better and at least two situations in which RR scheme performs better with clear justification 	4
<ul style="list-style-type: none"> Provide a substantial but incomplete comparison of the First Come First Served, and Round Robin scheduling schemes List several situations (less than four in total) for the scheduling schemes to performs better with justification 	3
<ul style="list-style-type: none"> Outlines the First Come First Served, and Round Robin scheduling schemes in terms of key characteristics List several situations (less than three in total) for the scheduling schemes to performs better without justification 	2
<ul style="list-style-type: none"> Outlines the First Come First Served, and Round Robin scheduling schemes in terms of key characteristics Repeats relevant material verbatim or near-verbatim from a cited or 	1

referenced reliable source on general potential advantage and disadvantages	
• Performance does not meet the criteria above	0