		Air Cargo Problem 1	Air Cargo Problem 2	Air Cargo Problem 3
BFS Breadth First Search	Expansions	43	3343	14663
	Goal Tests	56	4609	18098
	New Nodes	180	30509	129631
	Time Elapsed	0.045	11.366	55.873
	Plan Length	6	9	12
BFS - Tree Breadth First Tree Search	Expansions	1458		
	Goal Tests	1459		
	New Nodes	5960		
	Time Elapsed	1.375		
	Plan Length	6		
BFS - Graph Breadth First Graph Search	Expansions	12	582	627
	Goal Tests	13	583	628
	New Nodes	48	5211	5176
	Time Elapsed	0.013	3.977	4.124
	Plan Length	12	575	596
DLS Depth Limited Search	Expansions	101		
	Goal Tests	271		
	New Nodes	414		
	Time Elapsed	0.137		
	Plan Length	50		
UCS Uniform Cost Search	Expansions	55	4852	18235
	Goal Tests	57	4854	18237
	New Nodes	224	44030	159716
	Time Elapsed	0.053	15.705	67.473
	Plan Length	6	9	12
RBFS Recursive Best First Search h_1	Expansions	4229		
	Goal Tests	4230		
	New Nodes	17029		
	Time Elapsed	3.978		
	Plan Length	6		
GBFS Greedy Best First Search	Expansions	7	990	5614
	Goal Tests	9	992	5616
	New Nodes	28	8910	49429
	Time Elapsed	0.009	3.171	20.998
	Plan Length	6	17	22
A*S h_1 A Star Search with heuristic h_1	Expansions	55	4852	18235
	Goal Tests	57	4854	18237
	New Nodes	224	44030	159716
	Time Elapsed	0.056	15.994	68.462
	Plan Length	6	9	12

A*S h_IPC A Start Search with heuristic Ignore Pre-Conditions	Expansions	41		
	Goal Tests	43		
	New Nodes	170		
	Time Elapsed	2.529		
	Plan Length	6		
A*S h_pg_Lvl-SUM A Start Search with heuristic pg_level_sum	Expansions	60		
	Goal Tests	62		
	New Nodes	240		
	Time Elapsed	1.48		
	Plan Length	6		
Optimal Sequence of Actions		Load(C2, P2, JFK)	Load(C2, P2, JFK)	Load(C2, P2, JFK)
		Load(C1, P1, SFO)	Load(C1, P1, SFO)	Load(C1, P1, SFO)
		Fly(P2, JFK, SFO)	Load(C3, P3, ATL)	Fly(P2, JFK, ORD)
		Unload(C2, P2, SFO)	Fly(P2, JFK, SFO)	Load(C4, P2, ORD)
		Fly(P1, SFO, JFK)	Unload(C2, P2, SFO)	Fly(P1, SFO, ATL)
		Unload(C1, P1, JFK)	Fly(P1, SFO, JFK)	Load(C3, P1, ATL)
			Unload(C1, P1, JFK)	Fly(P1, ATL, JFK)
			Fly(P3, ATL, SFO)	Unload(C1, P1, JFK)
			Unload(C3, P3, SFO)	Unload(C3, P1, JFK)
				Fly(P2, ORD, SFO)
				Unload(C2, P2, SFO)
				Unload(C4, P2, SFO)

NOTE: Red back-ground means my system was not able to provide solution in less than 10 mins.

Best Optimal Solution: *BFS (Breadth First Search) is the best optimal solution for all three problems.*

Conclusion: It is mentioned in AIMA (3rd Edition) section

3.4.7 Comparing uninformed search strategies:

- BFS and UCS search strategies are optimal
- DLS is not optimal

Above test results justify this statement.

Breadth First Search and Uniform Cost Search are providing optimal solution when we have required time to execute.

BFS(Graph) – Is first step solution when we do not have all the time needed to execute optimal solution

GBFS (Greedy Best) – Provide better solution than BFS(Graph) by taking more time to execute than BFS(Graph). This can be selected when we have more time than BFS(Graph) needs.