

Task 1
Part A
Question 1
Absolute

FULL BUFFER	Round Robin (RR)		Proportional Fair (PF)		Maximum Rate (MR)	
	TDMA-RR	OFDMA-RR	TDMA-PF	OFDMA-PF	TDMA-MR	OFDMA-MR
Average Aggregate Throughput (Mbps)	14.2227054	5.8160976	17.6760668	9.8555592	20.5284968	16.267699
Average Packet Loss Rate (%)	55.2772652	81.7115108	44.4183068	69.0095838	35.4489546	48.8468634
Average Packet Delay (ms)	1301.695774	2028.891066	1035.29442	1559.982059	306.3106924	530.6841438

Task 1
Part A
Question 1
Relative

FULL BUFFER	Round Robin (RR)		Proportional Fair (PF)		Maximum Rate (MR)	
	TDMA-RR	OFDMA-RR	TDMA-PF	OFDMA-PF	TDMA-MR	OFDMA-MR
Average Aggregate Throughput	0.6928274164	0.2833182408	0.8610502256	0.4800916159	1	0.7924447249
Average Packet Loss Rate	0.6764930015	1	0.5435991376	0.8445515586	0.4338306103	0.5977966008
Average Packet Delay	0.6415799231	1	0.5102760011	0.7688840888	0.1509744399	0.2615636456

Task 1
Part A
Question 2
Absolute

NON FULL BUFFER	Round Robin (RR)		Proportional Fair (PF)		Maximum Rate (MR)	
	TDMA-RR	OFDMA-RR	TDMA-PF	OFDMA-PF	TDMA-MR	OFDMA-MR
Average Aggregate Throughput (Mbps)	8.809022	5.379701	9.848388	8.3388054	10.3080918	8.7288324
Average Packet Loss Rate (%)	27.864531	55.9466132	19.3533532	31.7150482	15.5889222	28.5211876
Average Packet Delay (ms)	616.0573464	1388.895892	403.5855538	625.4659586	307.5317186	534.0768868

Task 1
Part A
Question 2
Relative

NON FULL BUFFER	Round Robin (RR)		Proportional Fair (PF)		Maximum Rate (MR)	
	TDMA-RR	OFDMA-RR	TDMA-PF	OFDMA-PF	TDMA-MR	OFDMA-MR
Average Aggregate Throughput	0.8545734915	0.5218910643	0.9554035986	0.8089572311	1	0.8467942049
Average Packet Loss Rate	0.498055725	1	0.3459253759	0.5668805739	0.2786392475	0.5097929252
Average Packet Delay	0.443559053	1	0.2905801336	0.4503332196	0.221421721	0.3845334197

Task 1
Part B
Question 3

FULL BUFFER TDMA	Round Robin (RR)			Proportional Fair (PF)			Maximum Rate (MR)		
	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Throughput (Mbps)	Loss Rate (%)	Delay (ms)
1	31.056294	2.344711	59.68146	31.689498	0.353629	8.844871	31.691942	0.345941	8.49957
2	15.893645	50.023063	1250.728921	15.827635	50.230627	1255.540445	31.689498	0.353629	9.377685
3	6.715866	78.882226	1971.526454	6.659635	79.059041	1976.414473	0.405837	98.723862	2527.441482
4	2.063411	93.511685	2337.088537	2.01696	93.657749	2341.127659	0	100%	0
5	31.689498	0.353629	9.134189	31.689498	0.353629	9.138424	31.691942	0.345941	8.718766
6	31.687053	0.361316	9.205617	31.687053	0.361316	9.210053	31.689498	0.353629	8.823376

FULL BUFFER OFDMA	Round Robin (RR)			Proportional Fair (PF)			Maximum Rate (MR)		
	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Throughput (Mbps)	Loss Rate (%)	Delay (ms)
1	9.786534	69.22663	1919.977488	16.957133	46.678967	1191.897526	31.645491	0.492005	12.765605
2	0.858125	97.301661	2625.711565	1.552448	95.118389	2402.741514	0	100%	0
3	1.486438	95.325953	1776.141989	0.224922	99.292743	1725.743284	3.30537	89.606396	2071.301015
4	1.149056	96.386839	1956.620071	0.119795	99.623309	1977.415301	0.002445	99.992312	34.232281
5	13.414618	57.818266	1635.390151	24.279309	23.654674	616.586806	31.684608	0.369004	10.216718
6	13.414618	57.818266	1635.390151	24.279309	23.654674	616.648949	31.682163	0.376691	10.267936

Task 2
Part A
Question 4
Absolute

FULL BUFFER TDMA-PF	Numerology 0	Numerology 1	Numerology 2	Numerology 3
Average Aggregate Throughput (Mbps)	17.5442106	17.6760668	17.844351	16.367284
Average Packet Loss Rate (%)	44.8329234	44.4183068	43.8891448	48.5337228
Average Packet Delay (ms)	1032.558421	1035.29442	1017.419247	803.5999778

Task 2
Part A
Question 4
Relative

FULL BUFFER TDMA-PF	Numerology 0	Numerology 1	Numerology 2	Numerology 3
Average Aggregate Throughput	0.9831800888	0.9905693292	1	0.9172249526
Average Packet Loss Rate	0.923747877	0.9152050211	0.9043020454	1
Average Packet Delay	0.9973572747	1	0.9827342135	0.7762042975

Task 2
Part B
Question 5

FULL BUFFER TDMA-PF	Numerology 0			Numerology 1			Numerology 2		Numerology 2	Numerology 2	Numerology 3	Numerology 3	Numerology 3
	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Throughput (Mbps)	Loss Rate (%)	Delay (ms)	Delay (ms)
1	31.662605	0.438192	10.336001	31.689498	0.353629	8.844871	31.704166	0.307503	8.176706	31.709056	0.292128	9.432274	
2	15.864307	50.115314	1253.840261	15.827635	50.230627	1255.540445	15.634496	50.837946	1270.88359	2.818854	91.136224	2280.709872	
3	6.730534	78.836101	1971.508826	6.659635	79.059041	1976.414473	6.498278	79.566421	1988.729109	4.361523	86.285363	2157.860333	
4	2.095194	93.411747	2336.945633	2.01696	93.657749	2341.127659	1.823821	94.265068	2357.413653	0.85568	97.309348	2456.264595	
5	31.66505	0.430504	10.904128	31.689498	0.353629	9.138424	31.704166	0.307503	8.321735	31.709056	0.292128	9.574685	
6	31.66016	0.445879	11.056102	31.687053	0.361316	9.210053	31.701722	0.315191	8.361662	31.706611	0.299815	9.60196	

Task 3
Part A
Question 6

Average Aggregate Throughput (Mbps)			
Speed (m/s)	Round Robin (RR)	Proportional Fair (PF)	Maximum Rate (MR)
10 m/s	6.5921996	11.4217592	16.7976302
50 m/s	5.2973114	10.77513	15.765965

Average Packet Loss Rate (%)			
Speed (m/s)	Round Robin (RR)	Proportional Fair (PF)	Maximum Rate (MR)
10 m/s	79.2866148	64.1116296	47.2200776
50 m/s	83.3552906	66.1434068	50.4616772

Average Packet Delay (ms)			
Speed (m/s)	Round Robin (RR)	Proportional Fair (PF)	Maximum Rate (MR)
10 m/s	4459.22238	3631.747932	914.2561796
50 m/s	4910.651359	4163.760261	1683.771306