



**CSE 318**

**Assignment on Local Search**

**Submitted By:**

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**Section: A1**

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Benchmark Data	Known Best Solution		Scheme 1 Largest Degree + Kempe + Pairswap (Exponential Penalty Strategy)			
	Timeslots	Penalty	Timeslots	Penalty		
				After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	32	9.43	5.13	5.06
CARS91	35	4.42	34	10.60	6.70	6.66
KFU93	20	12.96	20	36.53	16.20	15.86
TRE92	23	7.75	22	14.12	10.16	10.09
YOR83	21	34.84	23	49.80	32.26	32.20

Benchmark Data	Known Best Solution		Scheme 2 DSatur + Kempe + Pairswap (Exponential Penalty Strategy)			
	Timeslots	Penalty	Timeslots	Penalty		
				After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	29	9.15	6.03	6.00
CARS91	35	4.42	31	11.04	7.41	7.38
KFU93	20	12.96	19	36.87	17.08	16.80
TRE92	23	7.75	23	14.12	9.54	9.43
YOR83	21	34.84	21	48.38	37.36	37.22
Benchmark Data	Known Best Solution		Scheme 3 Largest Enrollment + Kempe + Pairswap (Exponential Penalty Strategy)			
	Timeslots	Penalty	Timeslots	Penalty		
				After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	34	9.70	5.03	4.97

CARS91	35	4.42	36	12.04	6.06	6.01
KFU93	20	12.96	21	40.39	16.12	15.70
TRE92	23	7.75	22	14.87	10.22	10.16
YOR83	21	34.84	23	48.84	32.72	32.51

Benchmark Data	Known Best Solution		Scheme 4 Random + Kempe + Pairswap (Exponential Penalty Strategy)			
	Timeslots	Penalty	Timeslots	Penalty		
				After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	42	7.36	3.82	3.72
CARS91	35	4.42	48	8.78	4.50	4.42
KFU93	20	12.96	25	30.44	11.09	10.66
TRE92	23	7.75	29	11.36	7.24	7.13
YOR83	21	34.84	29	41.90	25.27	24.91

Benchmark Data	Known Best Solution		Scheme 5 Largest Degree + Kempe + Pairswap (Linear Penalty Strategy)			
	Timeslots	Penalty	Timeslots	Penalty		
				After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	32	5.82	3.43	3.40

CARS91	35	4.42	34	6.61	4.35	4.32
KFU93	20	12.96	20	20.58	10.41	10.32
TRE92	23	7.75	22	8.73	6.64	6.55
YOR83	21	34.84	23	28.75	21.40	21.29