

### Appendix A

Roll no.	f(n) = h <sub>i</sub> (n) and g(n) = h <sub>j</sub> (n)		Roll no.	f(n) = h <sub>i</sub> (n) and g(n) = h <sub>j</sub> (n)	
	i	j		i	j
170010020	11	14	190010019	6	9
170020001	7	14	190010020	7	10
170020011	9	12	190010021	12	13
170020021	3	7	190010023	7	9
170020023	10	13	190010024	1	9
170020024	13	14	190010025	1	8
170020029	2	5	190010026	1	5
170020032	8	12	190010027	1	7
170020033	11	12	190010028	11	13
170020037	2	13	190010029	10	11
170020039	1	6	190010030	3	13
170020040	3	8	190010031	3	12
180020025	2	3	190010032	4	9
180020040	1	12	190010033	9	11
180030026	5	11	190010034	6	14
190010001	8	14	190010035	3	5
190010002	7	8	190010036	6	8
190010003	5	7	190010037	3	6
190010004	3	11	190010038	4	13
190010005	2	7	190010039	5	10
190010006	10	14	190010040	5	13
190010007	8	10	190010041	10	12
190010008	3	14	190010042	7	13
190010009	4	11	190010043	8	9
190010010	2	4	190010044	6	11
190010011	5	14	190010045	6	13
190010012	1	2	190010046	1	11
190010013	7	12	190020020	4	5
190010015	5	8	190030003	3	9
190010016	9	14	190030007	5	12
190010017	6	12	190030026	2	6
190010018	2	14	190030043	4	12

### Appendix B

Roll no.	Pre-order traversal		Roll no.	Pre-order traversal
170010020	[5, 2, 1, 3, 4, 7, 6, 9, 8]		190010019	[1, 2, 5, 4, 3, 8, 6, 7, 9]
170020001	[6, 5, 1, 2, 3, 4, 7, 8, 9]		190010020	[2, 1, 6, 3, 5, 4, 8, 7, 9]
170020011	[7, 6, 1, 2, 3, 4, 5, 9, 8]		190010021	[5, 1, 2, 4, 3, 8, 7, 6, 9]
170020021	[5, 2, 1, 4, 3, 9, 6, 8, 7]		190010023	[7, 1, 3, 2, 6, 4, 5, 8, 9]
170020023	[6, 1, 3, 2, 5, 4, 7, 9, 8]		190010024	[1, 5, 2, 4, 3, 8, 7, 6, 9]
170020024	[6, 1, 2, 4, 3, 5, 8, 7, 9]		190010025	[1, 3, 2, 6, 4, 5, 8, 7, 9]
170020029	[8, 1, 6, 4, 2, 3, 5, 7, 9]		190010026	[6, 1, 4, 2, 3, 5, 9, 7, 8]
170020032	[2, 1, 9, 5, 3, 4, 7, 6, 8]		190010027	[4, 1, 2, 3, 6, 5, 7, 8, 9]
170020033	[2, 1, 9, 3, 8, 4, 6, 5, 7]		190010028	[6, 3, 2, 1, 5, 4, 9, 7, 8]
170020037	[4, 1, 3, 2, 8, 5, 7, 6, 9]		190010029	[9, 5, 3, 1, 2, 4, 6, 7, 8]
170020039	[3, 1, 2, 7, 6, 5, 4, 9, 8]		190010030	[1, 6, 5, 4, 2, 3, 8, 7, 9]
170020040	[7, 2, 1, 4, 3, 6, 5, 8, 9]		190010031	[1, 2, 3, 7, 6, 5, 4, 8, 9]
180020025	[2, 1, 4, 3, 7, 6, 5, 9, 8]		190010032	[8, 1, 3, 2, 6, 4, 5, 7, 9]
180020040	[3, 2, 1, 6, 4, 5, 7, 9, 8]		190010033	[5, 4, 2, 1, 3, 7, 6, 9, 8]
180030026	[7, 6, 1, 4, 3, 2, 5, 9, 8]		190010034	[5, 2, 1, 4, 3, 8, 7, 6, 9]
190010001	[1, 2, 7, 5, 4, 3, 6, 8, 9]		190010035	[2, 1, 9, 7, 5, 3, 4, 6, 8]
190010002	[4, 1, 2, 3, 8, 5, 7, 6, 9]		190010036	[4, 2, 1, 3, 8, 5, 6, 7, 9]
190010003	[7, 2, 1, 3, 6, 4, 5, 8, 9]		190010037	[8, 1, 6, 2, 3, 5, 4, 7, 9]
190010004	[3, 1, 2, 4, 8, 5, 6, 7, 9]		190010038	[5, 4, 1, 2, 3, 9, 6, 8, 7]
190010005	[6, 1, 2, 5, 4, 3, 7, 9, 8]		190010039	[9, 3, 2, 1, 8, 7, 6, 5, 4]
190010006	[3, 1, 2, 4, 5, 9, 8, 7, 6]		190010040	[3, 1, 2, 9, 8, 4, 7, 6, 5]
190010007	[8, 2, 1, 5, 3, 4, 7, 6, 9]		190010041	[7, 3, 1, 2, 4, 6, 5, 8, 9]
190010008	[2, 1, 4, 3, 9, 5, 8, 7, 6]		190010042	[6, 3, 1, 2, 4, 5, 9, 7, 8]
190010009	[1, 4, 2, 3, 5, 6, 9, 8, 7]		190010043	[2, 1, 8, 7, 3, 5, 4, 6, 9]
190010010	[9, 1, 3, 2, 4, 5, 6, 8, 7]		190010044	[6, 2, 1, 5, 4, 3, 8, 7, 9]
190010011	[6, 5, 4, 3, 1, 2, 9, 8, 7]		190010045	[6, 5, 3, 1, 2, 4, 8, 7, 9]
190010012	[1, 8, 5, 2, 4, 3, 7, 6, 9]		190010046	[4, 1, 3, 2, 6, 5, 7, 9, 8]
190010013	[6, 2, 1, 5, 3, 4, 9, 8, 7]		190020020	[4, 3, 2, 1, 9, 8, 7, 5, 6]
190010015	[3, 1, 2, 6, 4, 5, 7, 8, 9]		190030003	[3, 2, 1, 7, 6, 4, 5, 9, 8]
190010016	[2, 1, 9, 7, 4, 3, 6, 5, 8]		190030007	[9, 8, 5, 4, 1, 2, 3, 6, 7]
190010017	[6, 2, 1, 4, 3, 5, 9, 7, 8]		190030026	[5, 3, 1, 2, 4, 8, 7, 6, 9]
190010018	[1, 4, 2, 3, 6, 5, 9, 8, 7]		190030043	[4, 2, 1, 3, 9, 8, 5, 6, 7]