**Q1(a)**

1 Mark, if question is attempted

2 Marks, if sub set construction is correct.

3 Marks, if resultant DFA is made, but does not have proper initial and final states marked.

4 Marks, if all correct.

**Q1(b)**

1 Mark, if question is attempted

2 Marks, if new transition table is correct.

3 Marks, if resultant DFA is made, but does not have proper initial and final states marked.

4 Marks, if all correct.

**Q1(c)**

1 Mark, if question is attempted

2 Marks, if the DFA for RE is made.

3 Marks, if resultant DFA is made, but does not have proper initial and final states marked.

4 Marks, if all correct/ or if student writes the DFA and its closure are same even if he does not apply any method for closure.

**Q2(a and b)**

0.5 if wrong, 2 if correct

**Q3(a)**

0.5 if wrong, 2 if correct

**Q3(b)**

1 if attempted, 2 if little mistake, 3 if CFG is correct (This is for each of the CFGs).

**Q3(c)**

1, if 1 tree is correct, 2 for 2 trees, 3 for 3 trees. 1 if all trees are wrong.

**Q4**

0.5 if wrong

2 if 6 states

3 if all correct