CSE 4703: Theory of Computation
Quiz 2
Time: 20 min, Mark: 30

1. Figure 1 is the state diagram of an NFA. Describe the language it accepts. Draw the diagram of the states the automata will be during the processing of input string 01011. 10

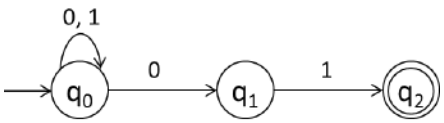

Figure 1: State diagram of an ε-NFA for question 1

2. Compute the ε-closure of each state and convert the ε-NFA of Table 1 to its equivalent DFA. 20

	ϵ	a	b	c
→ p	∅	{p}	{q}	{r}
q	{p}	{q}	{r}	∅
* r	{q}	{r}	∅	{p}

Table 1: Transition table of an ε-NFA for question 2