Course Title: Theory of Computation	**Course Code: CSE 2233**	**Credit Hours: 3.0**
Trimester & Year: Fall 2023	**Section: F, G**	**MdMH**

CT-01

Total Marks: **10**   Time: **30** min

1. Write a **Formal definition** of the DFA including the **transition table** by using the state diagram given in Figure 01. The DFA has been constructed over alphabet, $\Sigma = \{0, 1\}$.
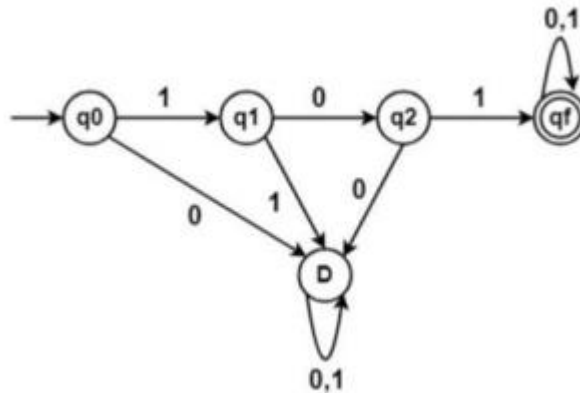
   2

Figure 01: State Diagram

2. Construct a **DFA** defined over alphabet $\Sigma = \{c, d, e\}$ that accepts all the strings w of the Language L where,

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   L = {w | w starts with **'dc'** and contains **'edd'** or **'dce'** and ends with **'ce'**}.

3. Design a **DFA** that accepts the Language, L over alphabet $\Sigma = \{a, b, c\}$

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   L = { w | w starts and ends with same symbol }.