|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Set –A | | | | |
| S. no | Question | Marks | COs | BT Level |
| 1. | Construct  DFA to accept the following languages over alphabet {0, 1}    a.       The language of all strings containing at least three 1’s.  b.      The language of all strings that do not end with 11. | 2.5 marks  Each | CO4 | Level 5 |
| 2. | Consider the following NDFA/NFA whose transition table is given and design DFA.  Q= {q0,q1,q2,q3}, ∑={a,b}. Here q0 is the initial state and q3 is the final state.    Explain the procedure step by step. | 5 marks | CO5 | Level 6 |

Assignment 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Set –B | | | | |
| S. no | Question | Marks | COs | BT Level |
| 1. | Construct  DFA to accept the following languages over alphabet {0, 1}  a.       The language of all strings containing even number of 1’s.  b.      The language of all strings containing number of 1’s divisible by 4. | 2.5 marks  Each | CO4 | Level 5 |
| 2. | Consider the following automation and find the regular expression using Arden’s theorem.      Explain the procedure step by step. | 5 marks | CO5 | Level 6 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Set –C | | | | |
| S. no | Question | Marks | COs | BT Level |
| 1. | 1.       Construct  DFA to accept the following languages over alphabet {0, 1}  a.       The language of all strings of length two.  b.      The language of all strings beginning with 1 and not having two consecutive 0’s. | 2.5 marks  Each | CO4 | Level 5 |
| 2. | Consider the following NFA and construct equivalent DFA. | 5 marks | CO5 | Level 6 |