**BMS** **INSTITUTE OF TECHNOLOGY & MANAGEMENT**

(An Autonomous Institution affiliated to VTU, Belagavi)

Yelahanka, Bengaluru-560119

**Department of Computer Science and Engineering**

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| **Course Name** | Theory of Computation | **Course Coordinator** | Dr. Thippeswamy, Dr.Hemamalini |
| **Course Code** | 21CS68 | **Academic Year** | 2023-24 |
| **Semester/Section** | 6 | **Term** | Even |

**CO Statements:**

|  |  |
| --- | --- |
| **Cos** | **At the end of the course, the student will be able to** |
| **CO1** | Make use of the concept of abstract machines and their power to recognize the languages. |
| **CO2** | Apply the finite state machines for modelling and solving computing problems. |
| **CO3** | Design context free grammars for formal languages. |
| **CO4** | Analyse difference between decidability and undecidability. |
| **CO5** | Design the automata using the JFLAP Tool |

**CO-PO-PSO Mapping:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PSO1** | **PSO2** |
| **CO1** | 2 |  |  |  |  |  |  |  |  |  |  |  |  |
| **CO2** | 2 |  | 1 |  | 1 |  |  |  |  |  |  | 1 |  |
| **CO3** | 2 |  |  |  | 1 |  |  |  |  |  |  | 1 |  |
| **CO4** | 2 |  |  |  |  |  |  |  |  |  |  |  |  |
| **CO5** |  |  |  |  | 3 |  |  | 2 | 2 |  |  | 1 |  |

**CO Attainment:**

|  |  |  |  |
| --- | --- | --- | --- |
| **COs** | **Target** | **Attained** | **Observations** |
| **CO1** | **3** | 2.00 | The CO attainment is Moderate. The CO is mostly in understand and explain level. In the coming semester, More assignments or questions may be framed at explain level. |
| **CO2** | **3** | 2.00 | The CO attainment is Moderate. Students are able to understand the FSM but difficult in designing the FSM. More assignments, Practical examples and hands-on tools may improve the attainment. |
| **CO3** | **3** | 2.00 | The CO attainment is quite good. More analytical problems on finite automata, grammars can be given |
| **CO4** | **3** | 0.75 | To analyse the real time examples on decidability and un decidability and further to illustrate them with examples |
| **CO5** | **3** | 0.75 | The CO attainment is poor. Student are able to simulate given design but struggled to debug their own designs. |

**Action Plan to improve CO attainment:**

|  |  |
| --- | --- |
| **Cos** | **Action Plan** |
| **CO1** | To accommodate effective delivery methods, setting up of quality question papers which includes higher end Bloom’s levels |
| **CO2** | Appropriate Alternative Assessment Tools such realizing TOC concepts through real life examples. |
| **CO3** | The CO attainment is quite good. More analytical problems on finite automata, grammars can be given |
| **CO4** | To analyse the real time examples on decidability and un decidability and further to illustrate them with examples |
| **CO5** | Assignments or projects on this tool may be given to simulate real world problems. |

**Course Coordinator Module Coordinator Program Coordinator**

**HOD, CSE**