



# PES UNIVERSITY

(Established under Karnataka Act no. 16 of 2013 )

100ft Ring Road, BSK 3rd Stage, Hosakerehalli, Bengaluru - 560085

**Department of Computer Science & Engineering**

**Automata Formal Languages & Logic**

**Course Instructor : Prof. Preet Kanwal**

**Sem 3**

## Unit 1 Finite State Machines

Class Hour	Topic	Textbook - Chapter & Section	Recorded Video	Slides	Notes	Homework	MCQ	Question Bank	Q&A	% Coverage	
										Unit	Total
1	Introduction to the Course	-	✓	□	□	□	□	□	□	18	18
1	Unit 1 Outline	-	✓	✓	□	□	□	□	□		
1	Mathematical Preliminaries : Sets	T1-1.1	✓	✓	✓	□	✓	✓	✓		
2	Mathematical Preliminaries : Functions & Relations	T1-1.1	✓	✓	✓	□	✓	✓	✓		
2	Basic Notations	T1-1.2	✓	✓	□	□	□	□	□		
3 - 6	Deterministic Finite Acceptors	T1-2.1	✓	✓	✓	✓	✓	✓	✓		
7	Non -Deterministic Finite Acceptors, $\lambda$ -NFA	T1-2.2	✓	✓	✓	✓	✓	✓	✓		
8	Equivalence of Deterministic and Non-deterministic Finite Acceptors	T1-2.3	✓	✓	✓	✓	✓	✓	✓		
9 - 10	Reduction of the number of states in Finite Automata(Minimization of DFA)	T1-2.4	✓	✓	✓	✓	✓	✓	✓		
10	JFLAP - Short Tutorial	<a href="http://www.jflap.org/">http://www.jflap.org/</a>	✓	□	□	□	□	□	□		
	Applications of Finite State Machines	<a href="https://gamedevelopment.tutsplus.com/tutorials/finite-state-machines-theory-and-implementation--gamedev-11867">https://gamedevelopment.tutsplus.com/tutorials/finite-state-machines-theory-and-implementation--gamedev-11867</a> <a href="https://people.cs.clemson.edu/~goddard/texts/theoryOfComputation/5.pdf">https://people.cs.clemson.edu/~goddard/texts/theoryOfComputation/5.pdf</a> <a href="http://robotics.sk/go/FSM/finite-state-">http://robotics.sk/go/FSM/finite-state-</a>	✓	✓	✓	□	□	□	□		