

SVM Institute of Technology, Bharuch
 Department of CE & IT
 Syllabus: Mid Semester examination (Even sem 2018-19)
 BE – IV(8th Sem) CE & IT

Name of Faculty: G I Prajapati, J T Patel

Subject Code: 2180703

Subject Name: Artificial Intelligence

Sr. No.	Unit	Topics
1	Unit 1	The AI Problems, The Underlying Assumption, What Is An AI Techniques, The Level Of The Model, Criteria For Success, Some General References, One Final Word.
2	Unit 2	Problems, State Space Search & Heuristic Search Techniques : Defining The Problems As A State Space Search, Production Systems, Production Characteristics, Production System Characteristics, And Issues In The Design Of Search Programs, Additional Problems. Generate-And-Test, Hill Climbing, Best-First Search, Problem Reduction, Constraint Satisfaction, Means-Ends Analysis
3	Unit 3	Knowledge Representation Issues : Representations And Mappings, Approaches To Knowledge Representation.
4	Unit 4	Using Predicate Logic : Representation Simple Facts In Logic, Representing Instance And Isa Relationships, Computable Functions And Predicates, Resolution.
5	Unit 5	Representing Knowledge Using Rules : Procedural Versus Declarative Knowledge, Logic Programming, Forward Versus Backward Reasoning.

Text Book:

- 1) Artificial Intelligence By Elaine Rich And Kevin Knight (2nd Edition) Tata Mcgraw-Hill

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Name of Faculty: Hinaxi M. Patel, Akanksha A. Mishra

Subject Code: 2180710

Subject Name: Big Data Analytics

Sr. No.	Unit	Topics
1	Unit 1	INTRODUCTION TO BIG DATA Introduction– distributed file system–Big Data and its importance, Four Vs, Drivers for Big data, Big data analytics, Big data applications. Algorithms using map reduce
2	Unit 2	INTRODUCTION TO HADOOP AND HADOOP ARCHITECTURE Big Data – Apache Hadoop & Hadoop EcoSystem, Moving Data in and out of Hadoop – Understanding inputs and outputs of MapReduce, Data Serialization.
3	Unit 3	NoSQL What is it?, Where It is Used Types of NoSQL databases, Why NoSQL?, Advantages of NoSQL, Use of NoSQL in Industry, SQL vs NoSQL, NewSQL
4	Unit 5	DATA BASE FOR THE MODERN WEB Introduction to MongoDB key features, Document-Oriented, principles of schema design, Constructing queries on Databases, collections and Documents , MongoDB Query Language.

Text Books:-

1. Chris Eaton,Dirk derooset al. , “Understanding Big data ”, McGraw Hill, 2012.
2. MongoDB in Action, Kyle Banker,Piter Bakkum , Shaun Verch, Dream tech Press

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Name of Faculty: Prof. Kruti J. Dangarwala, Prof. Nital J. Prajapati.

Subject Code: 2180711

Subject Name: Python Programming

Sr. No.	Unit	Topics
1	Unit 1	Introduction to Python <ul style="list-style-type: none">• The basic elements of python• Branching Programs• Control Structures• Strings and Input• Iteration
2	Unit 2	Functions, Scoping and Abstraction <ul style="list-style-type: none">• Functions and scoping• Specifications• Recursion• Global variables• Modules• Files• System Functions and Parameters
3	Unit 3	Structured Types, Mutability and Higher-Order Functions <ul style="list-style-type: none">• Strings, Tuples, Lists and Dictionaries• Lists and Mutability• Functions as Objects
4	Unit-5	Classes and Object-Oriented Programming <ul style="list-style-type: none">• Abstract Data Types and Classes• Inheritance• Encapsulation and Information Hiding
5	Unit-7	Advanced Topics I <ul style="list-style-type: none">• Regular Expressions – REs and Python• Plotting using PyLab• Networking and Multithreaded Programming – Sockets, Threads and Processes, Chat Application

Text Book:

1. John V Guttag. “Introduction to Computation and Programming Using Python”, Prentice Hall of India
2. R. Nageswara Rao, “Core Python Programming”, dreamtech
3. Wesley J. Chun. “Core Python Programming - Second Edition”, Prentice Hall