

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: 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

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BE – IV (8th Semester) IT

Name of Faculty: V R Patel

Subject Code: 2180713

Subject Name: Web Data Management

Sr. No.	Unit	Topics
1	Unit 1	Data Model: Introduction to Modeling Web Data, Semistructured data, XML, Web Data Management with XML, XML Standards, XML and syntax, XML Data Model, XLink, and XPointer.
2	Unit 2	XPath and XQuery: Introduction, Basics of XPath and XQuery, XPath: Steps and path expressions, Evaluation of path expressions, Generalities on axes and node tests, Axes, Node tests and abbreviations, Predicates, XPath 2.0; FLWOR expressions in XQuery: Defining variables - the for and let clauses, Filtering - the where clause, The return clause, Advanced features of XQuery; XPath foundations.
3	Unit 3	Typing: Motivating Typing, Automata, Schema Languages for XML, Typing Graph Data: Graph Semistructured Data, Graph Bisimulation, Data guides.
4	Unit 4	XML Query Evaluation: XML fragmentation, XML identifiers: Region-based identifiers, Dewey-based identifiers, Structural identifiers and updates; XML evaluation techniques: Structural join, Optimizing structural join queries, Holistic twig joins.
5	Unit 5	Ontologies, RDF, and OWL: Introduction, Ontologies by example, Web resources, URI, namespaces, RDF, RDFS: RDF Schema, OWL, Ontologies and (Description) Logics

Reference Books:

- Serge Abiteboul, Ioana Manolescu, Philippe Rigaux, Marie-Christine Rousset and Pierre Senellart, “Web Data Management”, Cambridge University Press, 2011
- Bhavani Thuraisingham, “Web Data Management and Electronic Commerce”, CRC Press, 2000
- Bhavani Thuraisingham, “XML Databases and the Semantic Web”, CRC Press, 2002

- Athena Vakali and George Pallis, “Web Data Management Practices: Emerging Techniques and Technologies”, IGI Publishing, 2007, ISBN-10: 1599042282; ISBN-13: 978-1599042282