# SARDAR PATEL UNIVERSITY
## Programme: MSC (Information Technology)
## Semester: III
## Syllabus with effect from: June 2010

| Paper Code: PS03EINT01 | Total Credits: 4 |
|---|---|
| **Title Of Paper:** Artificial Intelligence | |

| Unit | Description in detail | Weightage (%) |
|---|---|---|
| 1 | **Introduction:**<br>AI Problem Characteristics<br>Introduction to AI as an specified area of advanced DSS<br>Computer vision and perception, Problem solving<br>Machine Learning<br>Robotics<br>Searching in Problem space | 18 % |
| 2 | **Expert Systems:**<br>Introduction, Expert system shells,<br>Explanation, Rule based system and Forward-Backward chaining | 16 % |
| 3 | **Knowledge acquisition, Representation and Engineering:**<br>Approaches and issues in knowledge representation<br>Network representation<br>Structures: Semantic nets, Frames , Scripts<br>Fuzzy logic and reasoning<br>Fuzzy logic in Knowledge representation and reasoning | 16 % |
| 4 | **Prolog:**<br>Introduction, Prolog rules and predicates, controlling the execution,<br>Input and Output<br>Database (static and dynamic) | 18 % |
| 5 | **Natural language processing:**<br>Natural language processing<br>Level and stages of Natural language analysis<br>Fuzzy logic in NLP | 16 % |
| 6 | **Neural Networks:**<br>Introduction<br>Basic of Neuroscience<br>Types of Neural Networks<br>Learning and self organizing Neural Networks<br>Fuzziness in Neural Network<br>Applications of Neural Network | 16 % |

**Basic Text & Reference Books:**

- Elaine Rich and Kelvin Knight: Artificial Intelligence  2$^{nd}$ Edition - TMH
- AWL, Eugene Charniak: Introduction to Artificial Intelligence - Drew McDermott
- Morgan Kaufmann :Exploring Artificial Intelligence- Howard E. Shrobe
- Carl Townsend :Introduction to Turbo Prolog - BPB
- W.F.Clocksin  and C.S. Mellish : Programming In Prolog 3$^{rd}$ Edition - Narosa Publication House
- N.K.Bose , P.Liang :Neural Network Fundamentals with Graphs , Algorithm -  McGraw Hill Publications