TEXT BOOKS:

1. **Fundamentals of Database Systems,** Ramez Elmasri and Shanmkanth B. Navathe, 3rd Edition, Addison Pearson.
2. **Database Management System,** Raghu Ramakrishnan, Tata Mc Graw Hill, 3rd Edn. 2002.

REFERENCE BOOKS:

1. **Database Management and Design,** Gray W.hansen and James V. Hansen, 2nd Edn. Printice Hall India Pvt. Ltd., 2002.
2. **Database Management Systems,** Designing and Building business applications by Gerald V. Post, 3rd Edition, Tata Mc Graw Hill Publishing company Ltd.,- 2005
3. **Project Mangment with PERT and CPM,** Moder Joseph J and Phillips cerel, R., VAN Noserand, Reinhold, 2nd Edn., 1976.

ARTIFICIAL INTELLIGENCE

Subject Code	**: 10ME846**	**IA Marks**	**: 25**
Hours/Week	**: 04**	**Exam Hours**	**: 03**
Total Hours	**: 52**	**Exam Marks**	**: 100**

PART – A

UNIT - 1

Artificial Intelligence: Introduction, definition, underlying assumption, importance of AI & AI related fields.

06 Hours

UNIT - 2

Space Representation: Defining a problem. Production systems and its characteristics, Search and Control strategies – Generate and Test, Hill Climbing, Best – first Search, Problem reduction, Constraint Satisfaction, Means – Ends Analysis.

07 Hours

UNIT - 3

Knowledge Representation Issues: Representations and Mappings, Types of knowledge – Procedural Vs Declarative, Logic programming. Forward Vs Backward reasoning, Matching.

07 Hours

UNIT - 4

Use Of Predicate Logic: Representing simple facts, Instance and Isa relationships, Syntax and Semantics for Prepositional logic, FQPL and properties of Wffs, Conversion to Clausal form, Resolution, Natural deduction.

06 Hours

PART – B

UNIT - 5

Statistical And Probabilistic Reasoning: Symbolic reasoning under uncertainty, Probability and Bayes' theorem, Certainity factors and Rule based systems, Bayesian Networks, Shafer Theory, Fuzzy Logic.

07 Hours

UNIT - 6

Expert Systems: Structure and uses, Representing and using domain knowledge, Expert System Shells. Pattern recognition Learning classification patterns, recognizing and understanding speech. Introduction to knowledge Acquisition, Types of Learning.

07 Hours

UNIT - 7

Typical Expert Systems: MYCIN, Variants of MYCIN, PROSPECTOR, DENDRAL, PUFF, ETC.

06 Hours

UNIT - 8

Introduction To Machine Learning: Perceptrons, Checker Playing Examples, Learning Automata, Genetic Algorithms, Intelligent Editors.

06 Hours

TEXT BOOKS:

1. **Artificial Intelligence,** Elaine Rich & Kevin Knight, 3rd Ed., M/H 1983.
2. **Introduction to AI & ES,** Dan W. Patterson, Prentice Hall of India, 1999.

REFERENCE BOOKS:

1. **Principles of Artificial Intelligence**, Springer Verlag, Berlin, 1981.
2. **Artificial Intelligence in business, Science & Industry**, Wendy B. Ranch

3. **A guide to expert systems,** Waterman, D.A., Addison – Wesley inc. 1986
4. **Building expert systems,** Hayes, Roth, Waterman, D.A. Addison – Wesley, 1983

DESIGN OF EXPERIMENTS

Subject Code	**: 10ME847**	**IA Marks**	**: 25**
Hours/Week	**: 04**	**Exam Hours**	**: 03**
Total Hours	**: 52**	**Exam Marks**	**: 100**

PART – A

UNIT - 1

Introduction: Strategy of Experimentation, Typical applications of Experimental design, Basic Principles, Guidelines for Designing Experiments.

05 Hours

UNIT - 2

Basic Statistical Concepts: Concepts of random variable, probability, density function cumulative distribution function. Sample and population, Measure of Central tendency; Mean median and mode, Measures of Variability, Concept of confidence level. Statistical Distributions: Normal, Log Normal & Weibull distributions. Hypothesis testing, Probability plots, choice of sample size. Illustration through Numerical examples.

07 Hours

UNIT - 3

Experimental Design: Classical Experiments: Factorial Experiments: Terminology: factors, levels, interactions, treatment combination, randomization, Two-level experimental designs for two factors and three factors. Three-level experimental designs for two factors and three factors, Factor effects, Factor interactions, Fractional factorial design, Saturated Designs, Central composite designs. Illustration through Numerical examples.

07 Hours