

(VAC)

ARTIFICIAL INTELLIGENCE (AI)

UNIT -1 : Introduction to Artificial Intelligence

- Definition and history of AI, Key milestones and figures in AI history, Importance and impact of AI Today
- Types of AI , Narrow AI(weak AI), General AI (strong AI), Narrow AI vs. General AI : A comparative Analysis. The future of AI in India; Narrow vs. General AI
- AI applications and impact on various industries - AI in Healthcare, AI in Finance, AI in Retail, AI in Agriculture, AI in Manufacturing, AI in Education, AI in Transportation

UNIT -2 : Machine Learning Fundamentals , Neural Networks and Deep Learning

- Supervised learning : classification and regression
- Unsupervised learning : clustering and dimensionality reduction
- Reinforcement learning basics
- Evaluation metrics and model selection
- Perceptrons and Multilayer Networks
- Backpropagation and optimization Algorithms
- Convolutional Neural Networks (CNNs)
- Recurrent neural Networks (RNNs) and LSTMs

UNIT – 3 : Expert systems and knowledge – Based AI

- Rule Based system; Fuzzy logic; Ontologies and semantic networks; Preparing operating budgets; Cash budget; Flexible budgets; Forecasting techniques

UNIT – 4 : Ethics and Social impact of AI

- Bias and fairness in AI systems
- Privacy concerns and data protection
- AI governance and regulation
- AI 's impact on employment and society

Current Trends and Directions in AI :

- Explainable AI
- AI in edge computing and IoT
- Quantum computing for AI
- Artificial General Intelligence (AGI) concepts

PRACTICAL

- Create an image using **GEMINI** AI APP
- Solving Math problem using **math. now** AI Tool
- Generating presentation or PPT using **presentation.AI** Tool
- Preparing notes using **Notebook LLM** AI Tool
- Drafting a letter using **ChatGPT** AI Tool
- Getting awareness and generating certificate about cyber Crime and security using AI Tool "**Cyber Buddy Academy**"
- Design a conceptual AI based solution in terms of a mini project.

Evaluation

Theory Exam with 60% weightage (FM-100). Practical-20% weightage. Project & Viva-20% weightage.