

ARTIFICIAL INTELLIGENCE
[As per Choice Based Credit System (CBCS) scheme]
(Effective from the academic year 2017 -2018)

SEMESTER – V

Subject Code	17CS562	IA Marks	40
Number of Lecture Hours/Week	3	Exam Marks	60
Total Number of Lecture Hours	40	Exam Hours	03

CREDITS – 03

Module – 1	Teaching Hours
What is artificial intelligence?, Problems, Problem Spaces and search, Heuristic search technique TextBook1: Ch 1, 2 and 3	8 Hours
Module – 2	
Knowledge Representation Issues, Using Predicate Logic, Representing knowledge using Rules, TextBoook1: Ch 4, 5 and 6.	8 Hours
Module – 3	
Symbolic Reasoning under Uncertainty, Statistical reasoning, Weak Slot and Filter Structures. TextBoook1: Ch 7, 8 and 9.	8 Hours
Module – 4	
Strong slot-and-filler structures, Game Playing. TextBoook1: Ch 10 and 12	8 Hours
Module – 5	
Natural Language Processing, Learning, Expert Systems. TextBook1: Ch 15,17 and 20	8 Hours

Course outcomes: The students should be able to:

- Identify the AI based problems
- Apply techniques to solve the AI problems
- Define learning and explain various learning techniques
- Discuss expert systems

Question paper pattern:

The question paper will have TEN questions.

There will be TWO questions from each module.

Each question will have questions covering all the topics under a module.

The students will have to answer FIVE full questions, selecting ONE full question from each module.

Text Books:

1. E. Rich , K. Knight & S. B. Nair - Artificial Intelligence, 3/e, McGraw Hill.

Reference Books:

1. Artificial Intelligence: A Modern Approach, Stuart Rusell, Peter Norving, Pearson Education 2nd Edition.
1. Dan W. Patterson, Introduction to Artificial Intelligence and Expert Systems – Prentice Hal of India.
2. G. Luger, “Artificial Intelligence: Structures and Strategies for complex problem Solving”, Fourth Edition, Pearson Education, 2002.

Constructors, String Length, Special String Operations, Character Extraction, String Comparison, Searching Strings, Modifying a String, Data Conversion Using valueOf(), Changing the Case of Characters Within a String , Additional String Methods, StringBuffer, StringBuilder.	
Text book 1: Ch 12.1,12.2, Ch 13, Ch 15	
Course outcomes: The students should be able to:	
<ul style="list-style-type: none"> • Explain the object-oriented concepts and JAVA. • Develop computer programs to solve real world problems in Java. • Develop simple GUI interfaces for a computer program to interact with users 	
Question paper pattern: The question paper will have TEN questions. There will be TWO questions from each module. Each question will have questions covering all the topics under a module. The students will have to answer FIVE full questions, selecting ONE full question from each module.	
Text Books:	
1. Herbert Schildt, Java The Complete Reference, 7th Edition, Tata McGraw Hill, 2007. (Chapters 2, 3, 4, 5, 6,7, 8, 9,10, 12,13,15)	
Reference Books:	
1. Mahesh Bhawe and Sunil Patekar, "Programming with Java", First Edition, Pearson Education,2008, ISBN:9788131720806. 2. Rajkumar Buyya,S Thamarasi selvi, xingchen chu, Object oriented Programming with java, Tata McGraw Hill education private limited. 3. E Balagurusamy, Programming with Java A primer, Tata McGraw Hill companies. 4. Anita Seth and B L Juneja, JAVA One step Ahead, Oxford University Press, 2017.	

Sachin

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