



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR
(AUTONOMOUS)**

Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: KKR (20CS1403)

Course & Branch: B.Tech – CAI

Year & Sem : III B.Tech & I-Sem

Regulation : R20

UNIT –I

INTRODUCTION

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|---|---|---|-----------|------|
| 1 | a | Why is knowledge representation and reasoning (KRR) essential in artificial intelligence | [L2][CO1] | [6M] |
| | b | What role does logic play in knowledge representation and reasoning (KRR) | [L4][CO1] | [6M] |
| 2 | a | Explain first-order logic, and how does it function within knowledge representation and reasoning | [L2][CO1] | [6M] |
| | b | Explain types of KRR | [L4][CO1] | [6M] |
| 3 | a | Describe Syntax in First ordered Logic | [L2][CO1] | [6M] |
| | b | Describe semantics in First ordered Logic | [L4][CO1] | [6M] |
| 4 | a | Describe pragmatics in First ordered Logic | [L2][CO1] | [6M] |
| | b | Illustrate production rules | [L4][CO1] | [6M] |
| 5 | a | Analyze Explicit belief | [L2][CO1] | [6M] |
| | b | Apply facts and relations concept on Student-Professor relation. | [L4][CO1] | [6M] |
| 6 | a | Analyze implicit belief | [L2][CO1] | [6M] |
| | b | Create your family knowledge base | [L4][CO1] | [6M] |
| 7 | a | Illustrate expressive knowledge in KRR | [L2][CO1] | [6M] |
| | b | Create a Knowledge base for Vitamins deficiency and symptoms | [L4][CO1] | [6M] |
| 8 | a | Organize knowledge Engineering in KRR | [L2][CO1] | [6M] |
| | b | Summarize facts in KRR | [L4][CO1] | [6M] |

UNIT –II
RESOLUTION

1	a	Describe Propositional case	[L2][CO2]	[6M]
	b	Analyze Knowledge Representation and Resolution	[L4][CO2]	[6M]
	a	Illustrate Handling of variables and quantifiers	[L2][CO2]	[6M]
2	b	Evaluate Davis-Putnam procedure (DP) for satisfiability	[L4][CO2]	[6M]
	a	Derive The First-Order Case in Computational intractability	[L2][CO2]	[6M]
3	b	Derive Herbrand in Computational intractability	[L4][CO2]	[6M]
	a	Describe Clauses with an example	[L2][CO2]	[6M]
4	b	Create Facts and rules of any real world problem	[L4][CO2]	[6M]
	a	Analyze Horn clauses with examples	[L2][CO2]	[6M]
5	b	Categorize horn clause and pure negative clauses by using greedy paradigm.	[L4][CO2]	[6M]
	a	Analyze Deductive database in datalog	[L2][CO2]	[6M]
6	b	Create knowledge base and make queries.	[L4][CO2]	[6M]
	a	What is Selective Linear Definite(SLD)resolution.	[L2][CO2]	[6M]
7	b	Sketch SLD resolution tree.	[L4][CO2]	[6M]
	a	Describe Backward chaining in SLD.	[L2][CO2]	[6M]
8	b	Implement Backward chaining.	[L4][CO2]	[06M]
	a	Describe forward chaining in SLD	[L2][CO2]	[06M]
9	b	Implements forward chaining.	[L4][CO2]	[06M]

UNIT –III
REASONING

1	Analyse the Procedural control reasoning .	[L4][CO3] [12M]
a	Describe the Rule formation in KRR.	[L2][CO3] [6M]
2	b Analyse the types of Rules in KRR.	[L4][CO3] [6M]
3	Illustrate searching strategies in KRR with examples	[L4][CO3] [12M]
4	Analyse the Algorithm design in KRR	[L4][CO3] [12M]
5	Identify key challenges in Algorithm design in KRR	[L3][CO3] [12M]
a	Explain the importance of Goal order in KRR	[L2][CO3] [6M]
6	b Explain the methods of specifying Goal Order	[L2][CO3] [6M]
7	Analyze the committing to proof in KRR	[L4][CO3] [12M]
a	Discuss the Back Track controlling in KRR.	[L2][CO4] [6M]
8	b Discuss the concept Negation as Failure in KRR.	[L2][CO4] [6M]
9	Create a production system of any real world problem	[L7][CO4] [12M]
a	Analyze working memory in KRR	[L4][CO4] [6M]
10	b Evolve Production rules in KRR	[L3][CO4] [6M]
a	Explain conflict Resolution in production systems	[L2][CO4] [6M]
11	b Describe applications and advantages of Production system	[L2][CO4] [6M]

UNIT –IV
REPRESENTATION

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|---|---|-----------|-------|
| 1 | Describe Object Oriented Representation In KRR . with example | [L2][CO5] | [12M] |
| | a Describe the Frames formationim KRR | [L2][CO5] | [6M] |
| 2 | b Analyse frame with example in KRR | [L4][CO5] | [6M] |
| | a Elaborate key concepts in Frame formalization | [L4][CO5] | [6M] |
| 3 | b List out Advantages and Applications of Frame Formalism | [L2][CO5] | [6M] |
| | a Describe Structured Description | [L2][CO5] | [6M] |
| 4 | b Create an real world Structure Description | [L7][CO5] | [6M] |
| | a Analyze benefits of structured description in KRR | [L4][CO5] | [6M] |
| 5 | b Describe key concepts of Description Language in KRR | [L3][CO5] | [6M] |
| | a Explain major types of Description Language in KRR | [L2][CO5] | [6M] |
| 6 | b Describe applications and advantages of Production system | [L2][CO5] | [6M] |
| 7 | Describe Entailment and its types with examples | [L3][CO5] | [12M] |
| 8 | a Analyze computational entailment | [L4][CO5] | [6M] |
| | b Explain practical tools for Computational Entailment | [L2][CO5] | [6M] |
| 9 | a Describe key concepts of Taxonomy and Classification of KRR | [L3][CO5] | [6M] |
| | b Evolve Taxonomy relations in Knowledge Representation | [L3][CO5] | [6M] |

UNIT –V

APPLICATIONS OF KRR

1	Describe Applications of KRR in Intelligent systems	[L2][CO6]	[12M]
	a Describe planning in intelligent systems	[L2][CO6]	[6M]
2	b Analyse planning algorithms in intelligent systems	[L4][CO6]	[6M]
	a Elaborate Applications of planning	[L4][CO6]	[6M]
3	b Explain key components of Robotics	[L2][CO6]	[6M]
	a Describe types of Robots	[L2][CO6]	[6M]
4	b Analyze Applications of Robots	[L4][CO6]	[6M]
	a Analyze Challenges of Robots	[L4][CO6]	[6M]
5	b Describe Natural language understanding	[L3][CO6]	[6M]
	a Explain Intelligent tutoring systems	[L2][CO6]	[6M]
6	b Describe role of NLU in intelligent tutoring system	[L2][CO6]	[6M]
7	Describe Intelligent Agents with examples	[L3][CO6]	[12M]
8	a Analyze challenges in NLU for ITS	[L4][CO6]	[6M]
	b Explain practical Examples of NLU-ITS	[L2][CO6]	[6M]
9	a Describe Architecture of Intelligent agents	[L3][CO6]	[6M]
	b Illustrate Applications of Intelligent agents	[L3][CO6]	[6M]
10	a Describe Robotics and automation	[L3][CO6]	[6M]
	b Illustrate Applications of Robotics automation	[L3][CO6]	[6M]

Prepared by:

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