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**III.B.TECH- I-SEM-II MID EXAMINATION *Date:* 05.12.2024 Time*:* 1:30-03:30 PM**

**Subject: Artificial Intelligence Branch: CSE/IT Marks: 30 M**

***Note: Question paper contains two parts, Part - A and Part - B.***

***Part-A is compulsory which carries 10 marks. Answer all questions in part-A.***

***Part-B consists of (21/2) units. Answer any four full questions. Each question carries***

***5 marks and may have a,b,c sub questions.***

**PART-A** **2\*5=10**

1. Write some basic inference rules in FOL? ( CO5)
2. What is Knowledge Representation give an example. (CO4)
3. What is Existential in logical representation? (CO4)
4. Briefly describe ontology engineering? (CO4)
5. What is unification? (CO3)

**PART-B**  **5\*4=20**

6. List out with Syntax of FOL Basic elements (CO3)

7. Elucidate Techniques of Knowledge Representation in AI (CO4)

8. a) Write Forward Chaining Algorithm (CO4)

b) Write an example of backward chaining.

9. Describe STRIPS Representation with an example. (CO5)

10. Discuss classical planning with state-space Search and planning.

11. Explain probability reasoning and Dempster Shafer's theory. (CO5)

**SCHEME OF EVALUATION**

**Part –A**

|  |  |  |  |
| --- | --- | --- | --- |
| **SNO** | **THEORY** | **MARKS** | **TOTAL** |
| **1** | Write some basic inference rules in FOL | **2** | **2** |
| **2** | What is Knowledge Representation give an example | **2** | **2** |
| **3** | What is Existential in logical representation | **2** | **2** |
| **4** | Briefly describe ontology engineering | **2** | **2** |
| **5** | What is unification? | **2** | **2** |

**Part –B**

|  |  |  |  |
| --- | --- | --- | --- |
| **SNO** | **THEORY** | **MARKS** | **TOTAL** |
| **6** | List out with Syntax of FOLBasic elements | **5** | **5** |
| **7** | Elucidate Techniques of Knowledge Representation in AI | **5** | **5** |
| **8** | . a) Write Forward Chaining Algorithm  b) Write an example of backward chaining? | **2.5**  **2.5** | **5** |
| 9 | Describe STRIPS Representation with an example | **5** | **5** |

|  |  |  |  |
| --- | --- | --- | --- |
| **10** | Discuss classical planning with state-space Search and planning | **5** | **5** |
| **11** | Explain probability reasoning and Dempster Shafer's theory. | **5** | **5** |