

COURSE CODE(CREDITS): L-22M1WCI233

MAX. MARKS: 25

COURSE NAME: Knowledge based AI: Cognitive computing

COURSE INSTRUCTORS: Nishant Sharma

MAX. TIME: 1 Hour 30 Minutes

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

- Q1. Define computational psychometrics. If an AI agent exhibits similar mistakes as a human, we can say that AI agent mirrors same reasoning as that of humans". Explain your viewpoint on above statement. [1+2 marks] [CO-2]
- Q2. What are semantic networks? Explain semantic networks with prisoners and guards problem. [1+2 marks] [CO-2]
- Q3. Explain about cognitive architecture of production systems. What assumption are taken into account while we deal with cognitive architectures? [2+1 marks] [CO-3]
- Q4. How action selection is done in a production system . Explain with help of an example depicting state spaces? [2+2 marks] [CO-3]
- Q5. Write a detailed note on generate and test method with a suitable example. List the conditions required for a generate and test method to produce general optimal solution? What do we mean by combinatorial explosion? [1+2+1 marks] [CO-3]
- Q6. What is means-end analysis. Explain role of means-end analysis in problem solving. Give an illustrative example of block's problem and solve it to move from initial to goal state? [1+2+1marks] [CO-4]
- Q7 Explain complex frame systems with an appropriate example. How do we interpret a sentence in complex frame systems? [2+2 marks] [CO-4]