

TE Sem VI (KT) R-19 CMAPN C-Scheme Winter 2025

9/12/25

Time: 3 Hours

[Total Marks: 80]

- Note: i) Question no. 1 is compulsory
 ii) Attempt any three from remaining
 iii) Assume necessary data

1 Solve any four of the following:

- (a) Differentiate between Model-Based Agents and Goal-Based Agents. 5
- (b) Compare A* search with Greedy Best-First Search 5
- (c) Give the PEAS and State-Space description for an Interactive English Tutor. 5
- (d) Give the types of Quantifiers. Translate the following sentences into First-Order Predicate Logic (FOPL) using quantifiers. 5
 - i) Every student who studies hard passes the exam.
 - ii) Some doctors are researchers.
 - iii) All humans are mortal.
 - iv) There exists a country where everyone loves cricket.
- (e) Explain various methods of knowledge representation. 5

- 2 (a) Discuss the various properties of task environments in detail. Illustrate with an example of an Autonomous Delivery Drone. 10
- (b) Apply alpha beta pruning tree on following graph 10



