B. Engg. (Computer Science and Engineering)
6th Semester
CS-614: Artificial Intelligence

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt *five* questions in all, including Q. No. I (Section-A) which is compulsory and selecting atleast two questions each from Section-B & C.
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Section -A

Q 1 (a) How intelligence of an agent can be defined?   (10)

(b) How value of 'g' is calculated in A* algorithm?

(c) What are the characteristics of control strategy?

(d) List any four types of filler structures.

(e) What is default reasoning?

(f) What are continuous planning agents?

(g) Give any two examples of inductive learning.

(h) What is instance based learning?

(i) What are main limitations of STRIPS?

(j) List different elements of an expert system..

Section -B

Q2 (a) What are production systems? Explain the different problem characteristics.   (5)

(b) What is means ends analysis? Explain the algorithm in detail.   (5)

Q3 (a) Explain the basic min-max search algorithm in detail. Describe the relevance of rating criteria.   (5)

(b) What is iterative deepening? Describe its algorithm in detail.   (5)

Q 4 (a) How conflicts are resolved during matching?   (4)

(b) What is Non monotonic reasoning?   (3)

(c) What are fuzzy sets?   (3)

Section -B

Q5 (a) What do you mean by planning with propositional logic? Explain the SAT planner in detail.   (5)

(b) What is hierarchical planning? Describe a case study to explain its usage.   (5)

Q6 (a) What is computational learning? What is the role of knowledge in learning?   (5)

(b) How do we learn using incomplete data and hidden variables? Explain the method in detail.   (5)

Q7 (a) Explain different types of Expert system architectures. Describe the decision tree based expert   (6)
systems in detail.

(b) List the different phases of NLP. What is the purpose of pragmatic analysis.   (4)

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