

3 Yr. Degree/4 Yr. Honours 6th Semester Examination, 2026 (CCFUP)

Subject : Computer Science
Course : COMP 6014 (MAJOR)
(Artificial Intelligence)

Full Marks: 40

Time: 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words
as far as practicable.*

2×5=10

1. Answer any five questions.

- How does Artificial Intelligence differ from Traditional Programming?
- What is an AI agent?
- What do you mean by local maxima in context of AI searching technique?
- Write down the differences between Forward Chaining and Backward Chaining in rule based system.
- What is inference in AI?
- Write predicate logic representation of "some cats are intelligent".
- Write down time complexity of DFS algorithm.
- What is tuning test?

5×2=10

2. Answer any two questions.

- Explain A* searching algorithm m with the help of a suitable example. 1+4
- What is pruning? Explain Alpha-Beta pruning with the help of an example. 3+2
- Differentiate between informed search and uninformed search in AI. What is state space? 3+2
- Write a program in LISP/Prolog that removes n th item from a list.

10×2=20

3. Answer any two questions.

- What is Expert System? Explain a typical Expert System and its components. 2+8
- What do you mean by knowledge representation in AI? What are the different techniques available for knowledge representation in AI? Explain a graphical knowledge representation model that uses connected nodes. 2+3+5

Please Turn Over

PHIL6013

3 Yr. Degree/4 Yr. Honours 6th Semester Examination, 2026 (CCFUP)
Subject : Philosophy

COMP6014

(2)

(c) What is production system in AI? What are its key components? How does a production system function? 2+4+4

(d) Write short notes on (any two): 5+5=10

- (i) Augmented Transition Network
 - (ii) Truth Maintenance System
 - (iii) Intelligent Agents
 - (iv) Parsing Technique
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