Name: _____

Student Number: _____

Signature: _____

THE UNIVERSITY OF NEW SOUTH WALES
SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
Sample Examination

Summer Session, 2019

COMP13411/9414

Artificial Intelligence

Time allowed: **2 hours**
Total number of questions: **26**
This paper counts for **60%** of your final grade.
UNSW approved calculators **may** be used.
Questions are **NOT** worth equal marks.
Answer **all** questions.
Start your answer to each question on a new page.
Write answers in ink, in the script books provided.
Hand in question paper and script books when you are finished.
This paper may **not** be retained by the candidate.

Examiner's Use Only:

1-20	21	22	23	24	25	26	Total

Part A: Multiple Choice Questions

NOTE: Answer the questions in this section by filling in entries on the multiple-choice sheet supplied. Each question is worth 1 mark.

Question 1

(1 mark)

Compared to breadth-first search, depth-first search has:

(a) better time complexity and better space complexity

(b) better time complexity and worse space complexity

(c) worse time complexity and better space complexity

(d) worse time complexity and worse space complexity

20 MULTIPLE CHOICE QUESTIONS

Part B: Written Answer Questions

NOTE: Answer all questions in the answer books provided. Show all working.

Question 2

(X marks)

PROLOG PROGRAMMING

(SIMILAR TO THE PROLOG EXERCISES)

Question 3

(X marks)

PATH SEARCH
HEURISTIC PATH SEARCH

(SIMILAR TO WEEK 3 AND WEEK 4 EXERCISES)

Question 4

(X marks)

LEARNING AND DECISION TREES

(SIMILAR TO WEEK 6 EXERCISES)

Question 5

(X marks)

PROPOSITIONAL AND FIRST-ORDER LOGIC

(SIMILAR TO WEEK 9 EXERCISES)

Question 6

(X marks)

UNCERTAINTY AND PROBABILITY

(SIMILAR TO WEEK 10 EXERCISES)

Question 7

(X marks)

CONSTRAINT SATISFACTION

(SIMILAR TO WEEK 8 EXERCISES)

— END OF EXAM —