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**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS**

 **SCHOOL OF SCIENCE AND TECHNOLOGY**

**MAY/JUNE 2012 EXAMINATION**

CIT478 Artificial Intelligence

TIME ALLOWED: 21/2 Hours.

Answer any four (4 ) questions

1a. What is Artificial Intelligence? (6 marks)

1b. List five (5) tasks that an AI system can do. (10 marks)

1c. Mention two ideas in AI? (4 marks)

1d. List five (5) tasks that an AI system cannot do. (5 marks)

2a Explain the term “Heuristic” . (4 marks)

2b Write short notes on the following AI programming languages:

1. LISP
2. Prolog

(5 marks each)

2c. Mention three (3) features of Knowledge Representation Language (9 marks)

3a . What is an Expert System? (4 marks)

3b List (6) types of Expert Systems you know? (12 marks)

3c. Mention three (3) disadvantages of an Expert system.(9marks)

4a. Explain the word ROBOTICS and list its three (3) Components. (8 marks)

4b. List and explain any three (3) types of Robots you know. (12 marks)

4c. List five (5) areas where Robots can be used. (5 marks)

5a. What are Intelligent Agents? (6marks)

5b. Write short notes on the following:

1. Hill Climbing
2. Depth-First-Search

(5 marks each)

5c. What are the fundamental faculties of Intelligence? (5 marks)

5d. Mention any two (2) areas where LISP can be used. (4 marks)

 6a. Explain Knowledge Representation in terms of the distinct roles it plays.(6 marks)

 6b. Write short note on each of the following:

1. Natural language processing
2. Rationality

( 5 marks each)

 6c. List any three (3) characteristics of Knowledge Representation. (9 marks)