



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS**  
**SEPTEMBER/OCTOBER 2015 EXAMINATION**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

COURSE CODE: CIT478

COURSE TITLE: Artificial Intelligence – (2 Credits)

Answer any four (4) questions in 2½ Hours.  
Each question carries 17½ marks.

1a. Describe the word “ROBOTICS” and list three (3) areas where Robots can be used ( 7 marks)

1b. List and explain any three (3) types of Robot. (6 marks)

1c. Outline three major areas of AI (4½ marks)

2(a) Explain the term “Agent “ in AI. Identify three different environments in which an Agent can operate on. (7 marks)

2(b) List and explain three (3) things that AI can do. ( 6 marks)

2(c) Outline three fields that are linked or associated with AI (4½ marks)

3(a) What is Heuristic search? Outline four (4) types of AI Search (7 marks)

3(b) Identify and explain three Characteristics of a good knowledge representation  
( 6marks)

3(c) List three basic senses of Human beings (4½ marks)

4a . What is an Expert System. List three (3) types of Expert systems ?  
(7marks)

4b. Outline and explain three (3) advantages of an Expert system. (6 marks)

4c. Identify three (3) disadvantages of an Expert System (4½ marks)

5a. Describe a Goal Directed Agent with a diagram. (4 marks)

5b. List and explain any three (3) tasks in Natural Language Processing.  
(4½marks)

5c. Write short notes on the following:

- (i) Observability
- (ii) Determinism
- (iii) Dynamism

(3 marks each)

6(a) Give the full meaning of the following acronyms:

(i)

- GIGO

(ii) UCS

(iii) LDS

(iv) KBS

(v) FOL

(vi) IPL

(vii) XML

( 1 mark each)

6(b). Outline and explain three (3) areas where LISP can be used. (6 marks)

6(c). Identify three (3) features of Knowledge Representation Language (4<sup>1/2</sup> marks)