National Open University of Nigeria, University Village Plot 91 Cadastral Zone,

Nnamdi Azikiwe Express Way, Jabi, Abuja
Faculty of Sciences

APRIL/MAY, 2019 EXAMINATIONS

Course Code: CIT 478

Course Title: Artificial Intelligence–

Course Unit: (2 Credits)

Time: 2 hours

Answer Question 1 and any other three (3) questions

1**.** (a) Explain the term Knowledge Representation (KR) and List two features (6 marks)
   (b) Outline **four (4)** fields that are linked or associated with AI (4 marks)
   (c) Describe Uninformed Search strategy and give two examples (4 marks)
   (d) List **three (3)** places where List Processing (LISP) can be applied (3 marks)
   (e) Explain **four (4)** tasks that can be successfully performed by AI. (4 marks)
   (f) What do you understand by the term 'Heuristic Search"? (4 marks)

2. (a) Distinguish between Machine – learning algorithms and Hand produced rules (6 marks)
   (b) State **five (5)** basic characteristics of a good knowledge representation can cover (5 marks)
   (c) Explain the term "Agent " in Artificial Intelligence. Identify three different environments
       where an Agent can operate on. (4 marks)

3 (a) Write short notes on the following
      (i)   Robotics
      (ii)   Expert System
      (iii)   Backward chaining and Forward chaining (3 marks each)
   (b) Outline **four (4)** advantages of an Expert System (4 marks)
   (c) Identify three features of an Agent (2 marks)

4. (a) What is an Intelligent Agent? List its characteristics. (7 marks)
   (b) Outline **four (4)** examples of Intelligent Agents (4 marks)
   (c) Briefly describe an artificial intelligence programming language you came across in this
       course (4 marks)

5(a) What is an Inference Engine? (3 marks)
(b) What is Knowledge Base? List types (6 marks)
(c) Outline **three (3)** different types of Expert system (3 marks)
(d) List three sources of power for a Robot (3 marks)