



NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Plot 91, Cadastral Zone,

Nnamdi Azikiwe Expressway, Jabi, Abuja

FACULTY OF SCIENCES

2023_1 POP EXAMINATION

Course Code: CIT478
Course Title: Artificial Intelligence
Time Allowed: 2 Hours
Unit: 2units
Instruction: Answer Question one (1) and any two (2) other Questions

QUESTION 1

1. (a) Explain the Turing Test definition of Artificial Intelligence. (5 marks)
- (b) Artificial Intelligence is a branch of *Science which deals with helping* machines find solutions to complex problems in a more human-like fashion. Write short notes on the different approaches to Artificial Intelligence. (8 marks)
- (bii) List five(5) areas of an Artificial Intelligence. (5 marks)
1. (c) From your understanding of Artificial Intelligence, write short notes on four examples of systems that use Artificial Intelligence Systems:
(12 marks)

QUESTION 2

2. (a) An agent are systems that perceives its environment through sensors, and performs change through its' actuators and effect. The performance measure of an intelligent agent is a subjective measure to characterize how successful an agent is. Mention any four ways of measuring an agents performance ? (6 marks)
2. (b) List six examples of an agent? (9 marks)
2. (c) Outline five (5) characteristics of an agent environment? (5 marks)

QUESTION 3

3. (a) What is state space search in Artificial Intelligence? (2 marks)
3. (b) Explain five (5) terms used in state space search that you know ? (10 marks)
3. (c) Identify the differences between Un-informed and Informed search? (8 marks)

QUESTION 4

4. (a) Briefly explain Prolog programming Language. (4 marks)
4. (b) Explain four (4) prolog syntax or semantics that you know? (12 marks)
4. (c) List where LISP can be applied (6 marks)

QUESTION 5

5.(a) Write short notes on the following:

- (i) Robotics (3marks)
- (ii) Expert System (3marks)
- (iii) Backward chaining and Forward chaining (3marks)

5.(b) Outline the advantages and disadvantage of an Expert System. (8 marks)

5. (c) Briefly describe the two types of knowledge base. (3 marks)