

10



[Knowledge for Development]  
**KIBABII UNIVERSITY**

**UNIVERSITY EXAMINATIONS  
2015/2016 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS  
YEAR ONE SEMESTER TWO  
EXAMINATIONS**

**FOR THE MASTER OF SCIENCE IN  
INFORMATION TECHNOLOGY**

**COURSE CODE : MIT823**

**COURSE TITLE : ARTIFICIAL INTELLIGENCE AND  
EXPERT SYSTEMS**

**DATE: 14/05/2016**

**TIME: 9.00 AM -11.00 AM**

---

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS ONLY  
ALL QUESTIONS CARRY 20 MARKS EACH**

1. (a) What are the three most common properties of logical systems. (6 marks)
- (b) Explain what computational neuroscience is? (6 marks)
- (c) Discuss the importance of modelling in Artificial Intelligence (4 marks)
- (d) Why is search necessary in problem solving using artificial intelligence systems?  
Explain any two reasons (4 marks)
2. At Comptec Company, the managers needed expertise employees hired. The Head of Human Resource Department fronted for hiring expertise human beings while the Head of Information and Communication Technology insisted on acquiring expert systems.
  - (a) Discuss characteristics of human expert behaviour. (7 marks)
  - (b) Discuss the grounds that the Human Resource Manager can use to justify against acquiring expert systems. (8 marks)
  - (c) Identify factors that would limit adoption of Expert Systems use by a Human Resource Department in a manufacturing company (5 marks)
3. (a) Identify the broad reasoning approaches you would have an intelligent agent use (10marks)
- (b) Explain sources of uncertainty that agents have to work with in reasoning (10 marks)
4. Computers will never replace human beings despite research going on in Artificial Intelligence.
  - (a) Explain what a computer would need to pass the Turing test? (7 marks)
  - (b) Discuss why Artificial Intelligence advancement is likely to kick man out of his career. (8 marks)
  - (c) Why would it be necessary of Master of Information Technology students to learn Neural Networks (5 marks)
5. (a) Identify the four types of explanations commonly used in expert systems (4 marks)
- (b) Explain what data driven reasoning is as used in expert systems (4 marks)
- (c) Explain the common features that you would ensure are development within a systems you are developing for it to pass a test of it being an expert system (12 marks)