



UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
REGULAR EXAMINATION
FOR THE DEGREE OF
BACHELOR OF SCIENCE

COURSE CODE: COMP 222
COURSE TITLE: INTRODUCTION TO ARTIFICIAL
INTELLIGENCE

DATE: 23RD APRIL 2019 TIME: 4.00 P.M.- 7.00 P.M.

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INSTRUCTION TO CANDIDATES

Answer **ALL** questions in **Section A** and any three questions from section B.

Illustrate your answers with suitable diagrams wherever necessary

Duration of examination: 3 hours

SECTION A: (Answer ALL question from this section)

Question one (12 marks)

a) The definition of AI can be grouped into four categories briefly explain the four categories. (6 marks)

b) You have been invited to give a talk on AI at a workshop, briefly give the history of AI. (6 marks)

Question two (12 marks)

a) Turing test played a major role in the development of AI. Describe the Turing Test for artificial intelligence (6 marks)

b) What are the advantages and disadvantages of Depth-First-Search (6 marks)

Section B: (answer any three questions)

Question three (12 marks)

- a) Briefly define what an agent is in relation to AI (3 marks)
- b) What is rational depends on four things. Explain the four things (4 marks)
- c) Using a diagram illustrate the learning agent (5 marks)

Question four (12 marks)

- a) A problem can be defined by five components discuss using an example (7 marks)
- b) Explain the breath first search algorithm (5 marks)

Question five (12 marks)

- a) Using a diagram explain how an Agent interacts with the environment (6 marks)
- b) Differentiate between fully observable and partially observable environment (6 marks)

Question six (12 marks)

- a) Using five components that can be used formally to define a problem formulate the vacuum-cleaner problem (6 marks)
- b) A company is using simple reflex agent to design a robot. Illustrate using a diagram (6marks)