



COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

NCSC301: ARTIFICIAL INTELLIGENCE

END OF SECOND SEMESTER EXAMINATIONS

MAY 2021

LECTURER: MRS L. TEMBANI-FUNDISI

DURATION: 7 HOURS

INSTRUCTIONS

Section A: Answer **all** questions (compulsory)

Section B: Answer **ONE** question

Begin your answer to each question on a fresh page.

Section A (Compulsory)

- a. For each of the following activities, give a Performance Environment Actuator Sensor (PEAS) description of the task environments and characterize it in terms of the properties discussed in class.
- i. Cooking a meal
 - ii. Drilling a borehole
 - iii. Practicing basketball
 - iv. Bidding for a vehicle at an auction
 - v. Cleaning dirty room using a vacuum cleaner [10 marks]
- b. Artificial Intelligence is viewed as a tool to eradicate COVID -19, discuss some of the challenges that Information Technology specialists have encountered to fully accomplish this from 2019 up to date?
[25 marks]
- c. Using relevant examples discuss how problem solving techniques in Artificial Intelligence can successfully implement reinforcement learning tools [25 marks]

Section B

Question 1

- a. With the aid of relevant examples discuss recent developments in the field of artificial intelligence showing the impact of these developments on present day business operations in the health sector. [20 marks]
- b. Discuss how robotics can be utilized in civil wars that are arising in the Middle East. [20 marks]

Question 2

- a) During this COVID-19 pandemic, discuss how Artificial Intelligence has helped business operations to strive the test of time [20 marks]
- b) With the aid of a relevant practical examples of industrial application, evaluate a rule-based system suitable for use as a production system in the manufacturing industry. [20 marks]

END OF EXAMINATION