THE FEDERAL POLYTECHNIC, BIDA

SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

2019/2020 SESSION SECOND SEMESTER EXAMINATION

COURSE TITLE: INTRODUCTION TO A.I & EXPERT SYSTEMS COURSE CODE: COMP 423
EXAMINER: A A ALFA DATE: 25TH-08-2021

INSTRUCTIONS: ANSWER ALL QUESTIONS IN SECTION A AND ANY OTHER THREE IN SECTION B DO NOT WRITE ON THE QUESTION PAPER
CLASS: HND II TIME: 3HOURS

SECTION A

I. Briefly discuss the relationship between A.I and Expert system.

II. For now, we note that programming a computer to pass a rigorously applied test provides plenty to work on. The computer would need to possess some certain capabilities. Explain these capabilities

III. Use figure I below to find the order of visits from S to G of the nodes and the paths returned using (a) **BFS** (b) **DFS** (c) **UCS**

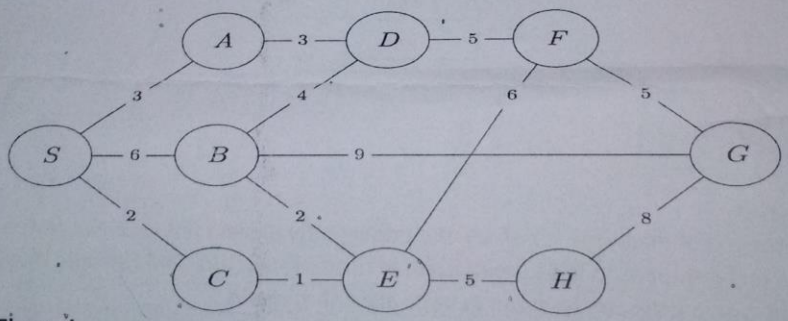

Figure I

IV. Use the map provided as figure II to search for the path using **BFS**, **DFS** and **UCS**. The starting point is Las Vegas and the goal is to get to Calgary

V. Evaluate (i) **a * (b + c) / d** (ii) **(60 * 9 / 5) + 32** using LISP programming

VI. Evaluate **>(set 'a 'b)** in LISP programming