

CSC 2702 DATABASE AND INFORMATION MANAGEMENT SYSTEMS

TEST ONE

Instruction

- 1. The test is for 1hour**
- 2. Read the scenario below and answer all the questions that follows**
- 3. Write your answers on a separate answer sheet**

Company ABC is an international company that deals with the business of shipping used vehicles from Japan to many countries in Africa. Lately, it has become cumbersome to maintain the business information manually hence they have come to you to help them computerize their information system. The company has branches all over Africa with the main branch based in Japan. They want an information system that will allow a centralized storage of information. This will allow different information produced by different branches to be kept in one place facilitating easy access to information. Further, in order to increase the performance of the system, the company wants to distribute their information system in this way; the part of the system that deals with interacting with the user will sit in Japan, the part of the system that handles business logic will sit in Zambia and the part of the system that deals with the storage of information will sit in Tanzania. The following is the information they want the system to keep;

1. Branch information. This includes; branch name; branch code and branch location. One branch can contain many employees.
2. Employee Information. This includes; man number, first name, second name and salary. An employee can enter a sale in the system
3. Sale information. This includes; sale id number, date of sale, name of the car sold, shipping date and amount paid for the car.

Questions

- 1) Looking at the information needs of company ABC, which approach between File-based and database would you use to implement their information system? Give seven (7) reasons to your answer [8 Marks]
- 2) Would you implement views in your information system? Give four (4) reasons to your answer [5 Marks]
- 3) What client-server architecture would you recommend for their system and why? [4 Marks]
- 4) How many primary keys and foreign keys can you identify from the scenario? [5 Marks]
- 5) Propose two (2) techniques that you can use to capture facts/information from company ABC during your system development life cycle. List three advantages and disadvantages for each proposed technique. [8 Marks]
- 6) Write an Entity-Relationship model that represents company ABC's information [20 Marks]