



"Investing in Africa's Future"

COLLEGE OF ENGINEERING AND APPLIED SCIENCES (CEAS)

NCIS 408: MANAGEMENT INFORMATION SYSTEMS

END OF SECOND SEMESTER EXAMINATIONS

APRIL 2025

LECTURER: MR TIMOTHY MAKAMBWA

TIME: 3 HOURS

INSTRUCTIONS

You are required to answer questions as instructed in each section

Start each question on a new page in your answer booklet

Answer all questions in Section A and any three from Section B

Section A – (Compulsory 40 Marks)

Answer all questions in this Section

Question One

Corporate strategic planning and the associated use of Management Information Systems (MIS) are vital tools for any organisation and are a major contributory factor towards its success. You have been asked by a newly formed company to undertake a corporate strategic plan. The company has an initial staff of 20 people but is expected to grow to 200 by the end of year 3.

- a) Explain, with examples, the types and levels of management you would recommend the company to adopt as part of the corporate strategic planning. **(13 marks)**
- b) Explain, with examples, how the planning and control elements of the MIS interrelate. **(12 marks)**
- c) Define competitive advantage. What factors can lead a firm to seek competitive advantage (refer to Porter's model). What are the main dominant strategies employed by organisations to achieve strategic advantage. **(15 marks)**

Section B (60 Marks)

Answer Any Three questions

Question Two

An international company with many offices worldwide is about to move to a new release of a business-critical system which will be installed on servers located at each office. The new release has taken many months to develop and will provide an improved understanding of how the business is performing; this new information should help the company, which is currently operating at a loss.

The company's management is considering the following two methods of changeover:

- Direct changeover
 - Phased changeover
- a) Write a report to the management which compares the two changeover methods being considered. **(10 marks)**
 - b) Identify the changeover method you would recommend and provide the reasons why you would select that method. **(10 marks)**

Question Three

For EACH of the following MIS concepts, provide an explanation and discuss its role, or roles, within Business Intelligence (BI) systems development:

- a) Star Schema. (4 marks)
- b) Applications prototyping. (4 marks)
- c) Meta Data Repository development. (4 marks)
- d) Extract-Transform-Load script. (4 marks)
- e) Interviewing. (4 marks)

Question Four

- a) a) State and justify THREE characteristics of information. (9 marks)
- b) b) With the aid of suitable illustrative examples, discuss the extent to which rule-based Expert Systems (ESs) can support the Human Resources (HR) function of an organisation. Include an overview of a rule-based ES within your answer. (11 marks)

Question Five

Cloud computing is making considerable progress into areas of MIS that are traditionally provided and managed within the physical perimeter of an organisation.

- a) Describe THREE aspects of cloud computing which may challenge conventional thinking in the provision of MIS. (10 marks)
- b) For ONE of these aspects, discuss in detail the risks AND benefits of the Cloud approach. (10 marks)

Question Six

End user computing is a long-established part of the culture in the company you have just joined as Head of MIS. While you knew this before taking up the post, you are surprised by the extent to which the company relies on departmental spreadsheets and databases that have been developed over many years by various teams in the organisation.

- a) Define end user computing. (5 marks)
- b) Describe FIVE success criteria for end user computing. (10 marks)
- c) Discuss how the success of end user computing could be measured. (10 marks)

Question Seven

Compare and contrast each of the following pairs of MIS concepts:

- i. Periodic reports and ad-hoc reports. (5 marks)
- ii. Simulation model and forecasting model. (6 marks)
- iii. Independent data mart and enterprise data warehouse. (7 marks)
- iv. Enterprise Resource Planning (ERP) system and Online Analytical Processing (OLAP) system. (7 marks)
- v. (OLAP) system. (7 marks)

END OF EXAMINATION