CHUKA UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN COMPUTER SCIENCE

COSC 812: STRATEGIC INFORMATION SYSTEMS

STREAMS: MSc. COMP. SC. **TIME: 3 HOURS**

DAY/DATE: TUESDAY 05/08/2025 **2.30 P.M. – 5.30 P.M.**

INSTRUCTIONS:

SECTION A (COMPULSORY)

QUESTION 1 (COMPULSORY) [30 MARKS]

a) Discuss how information system is contributing to competitive advantage **i**n organizations (5 marks)

b) Organizations require expert systems to offer intelligent information, for strategic benefits, from their computerized systems. Outline FIVE of such intelligent information that can be provided by the system. (5 marks)

c) Describe Porter's Five Forces model, and explain how it can be used to evaluate the strategic impact of information systems. (6 marks)

d) You are in a panel of developing business strategy of an upcoming financial institution. Identify TWO strategic objectives that the institution could in-cooperate.
From the objectives identified, develop FOUR information technology strategies that could ensure the above objectives are achieved; clearly indicating how they have been aligned to the business strategy. (6 marks)

e) During organization change management, ICT plays an important role. Outline FOUR roles of ICT in change management (4 marks)

f) Describe FOUR ethical guidelines that Information Technology professionals in workplaces should adhere to. (4 marks)

SECTION B (Answer two question from this section)

QUESTION 2 [15 MARKS]

a) A certain organization wanted to change their online payment systems to computerised system, for strategic advantage purposes. They chose to use the following data collection methods.

   i) STROBE
   ii) JAD
   iii) Interviewing

   Explain each of the above method of data collection; hence outline an advantage and a disadvantage of each of the above method of data collection. (6 marks)

b) You have been selected to be a member of the team that is tasked with aligning IT with business objectives.
   i) Explain why IT should be aligned with business objectives (2 marks)
   ii) Identify FOUR challenges that could be experienced when aligning IT with business objectives. (4 marks)
   iii) Suggest THREE measures that can be used to overcome the above challenges (3 marks)

QUESTION 3 [15 MARKS]

a) Assume you have been employed in a newly established fast moving goods company, without any process control systems.
   i) Identify THREE process control systems that you would put in place, hence indicate how each process will be contributing to the strategic advantage of the company. (6 marks)
   ii) Outline the various infrastructure tools to be put in place in order to achieve (i) above (3 marks)

b) You have been tasked to be the system analyst in developing a new system in your organization. Discuss the consequences of skipping the following stages in system development process: -

i) Feasibility study (3 marks)

ii) User training (3 marks)

QUESTION 4 [15 MARKS]

a) A certain health institution wanted to align their businesses to their vision using a balanced score card.

i) Outline FOUR uses of balanced score card (2 marks)

ii) Explain FOUR perspectives of balanced score card (4 marks)

iii) Develop a balanced score card for the health institution. Ensure to have the following: -

- At least TWO strategic objectives each focusing on the four perspectives (4 marks)
- At least TWO Measures and a target each under each of the strategic objective (5 marks)

QUESTION 5 [15 MARKS]

a) Using a case study and sufficient examples, discuss FOUR roles of DSS in Realigning Business Strategies (6 marks)

b) You have been called upon to be part of a team to develop ICT policy document for a higher learning institution. You have been tasked to write the following sub-sections of the policy document.

i) Harnessing with emerging technologies

ii) Server security

iii) Decommissioning of ICT equipment

Write the sub-sections of the policy document. Ensure that each sub-section is not less than 2/3 of a page, and should have at least: - a statement, TWO strategic objectives, and an expected outcome. (9 marks)

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