



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY
(BSIT 12J/BSIT 12M)

BIT 2119: MANAGEMENT INFORMATION SYSTEM

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2013
TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions.

Attempt question **ONE (COMPULSORY)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (Compulsory)

Case study: Information System in Restaurant

A waiter takes an order at a table, and then enters it online via one of the six terminals located in the restaurant dining room. The order is routed to a printer in the appropriate preparation area: the cold item printer if it is a salad, the hot-item printer if it is a hot sandwich or the bar printer if it is a drink. A customer's meal check-listing (bill) the items ordered and the respective prices are automatically generated. This ordering system eliminates the old three-carbon-copy guest check system as well as any problems caused by a waiter's handwriting. When the kitchen runs out of a food item, the cooks send out an "out of stock" message, which will be displayed on the dining room terminals when waiters try to order that item. This gives the waiters faster feedback, enabling them to give better

service to the customers. Other system features aid management in the planning and control of their restaurant business.

The system provides up-to-the-minute information on the food items ordered and breaks out percentages showing sales of each item versus total sales. This helps management plan menus according to customer's tastes. The system also compares the weekly sales totals versus food costs, allowing planning for tighter cost controls. In addition, whenever an order is voided, the reasons for the void are keyed in. This may help later in management decisions, especially if the voids consistently related to food or service. Acceptance of the system by the users is exceptionally high since the waiters and waitresses were involved in the selection and design process. All potential users were asked to give their impressions and ideas about the various systems available before one was chosen

- a) In the light of the system, describe the decisions to be made in the following area; as you explain state the types of information you would require in making such decision:
- (i) Strategic planning **(6 marks)**
 - (ii) Managing control **(6 marks)**
 - (iii) Operational control **(6 marks)**
- b) What would make the system a more complete MIS rather than just doing transaction processing. **(6 marks)**
- c) Explain the probable effects that the system more formal would have on the customers and the management **(6 marks)**

Question Two

- a) Although some companies find difficulties in justifying their information systems investment other companies report significant benefits from their 15 projects. Discuss any FOUR techniques organization can use to justify an investment in information systems **(8 marks)**
- b) Managing IT infrastructure poses both opportunities and challenges. Explain any FOUR challenges of managing IT infrastructure **(8 marks)**
- c) A company's ability to preserve knowledge that is embedded in the minds of the experienced employees can be seen as the most important criteria of successful knowledge management systems. Do you agree with this statement? Explain how this is done. **(4 marks)**

Question Three

Too many Information Systems!

ABC University has of late expanded very rapidly introducing a number of programmes and increasing student intake capacity. It has recently computerized its examination process based on some off the shelf software. The library had already been computerized a couple of years back using a freely distributed library Automation System. Daily cash transactions are also handled by computers in the Finance and Accounting Division, using an accounting software. For further improvement of efficiency, the new governing body of the University have entrusted the task of developing an MIS for the University to a software company.

All these developments were welcomed by a cross-section of the University community except a few. One of them is a faculty member at the Management Science Department who commented that the University is burdening itself with too many independent information systems. He strongly favoured an integrated information system on the lines of an ERP for a business organization.

- a) Do you agree with the faculty member? Give reasons. **(4 marks)**
- b) What do you understand by Integrated Information System, the faculty member is talking about? Elaborate in the context of the ABC University **(4 marks)**
- c) Visualize that the University governing Body decides to drop the MIS plan and agrees to the idea of developing an integrated IS. What problems are likely to creep in. **(4 marks)**
- d) Assess the role of Information System specialists and consultants in situation as described in the case. **(4 marks)**
- e) Distinguish between formal and informal information systems giving a valid example of each. **(4 marks)**

Question Four

- a) The Paris convention and Trade Centre (PCTC) is a large meeting complex that includes four hotels, five restaurants, five large ball rooms, a number of large meeting rooms, and office space for 1,000 employees. The information system that supports PCTC has the following features.
 - (i) Recommends meeting room configurations for the large boardrooms based on 1,000 rules for allocating rooms of various sizes.
 - (ii) Produces a data report for the restaurants showing expenses and revenue
 - (iii) Provided an interactive spreadsheet model for “what if” analysis of power and lighting costs for PCTC.
 - (iv) Diagnoses problems and recommends solutions to the physical plant manager at PCTC
 - (v) Creates on-demand responses to inquiries into availability and rates for office and meeting space at PCTC
 - (vi) Produces food ordering information for the restaurants based on an interactive food ordering model that management can change as needed.
 - (vii) Produces forecast information that will help plan office space requirements for PCTC tenants over the next five years.

Required:

- (i) Indicate which of the above features characterizes this system as a management information system (MIS). Explain why for each feature. **(4 marks)**
 - (ii) Indicate which of the above features characterizes this system as a decision support system (DSS). Explain why for each feature. **(3 marks)**
 - (iii) Indicate which of the above features characterizes the system as an expert system (ES). Explain why for each feature. **(4 marks)**
- b) Identify and explain FOUR principle goals of IS disaster recovery planning in an organization. **(5 marks)**
 - c) Evaluate any THREE major causes of information systems failure **(3 marks)**

d) Explain the term BPR (1 mark)

Question Five

Organizations are not always able to perform their own business information systems functions and some businesses prefer not to do so for various reasons. The solution for some is outsourcing.

- a) Briefly explain the concept of information systems outsourcing (5 marks)**
- b) Critically discuss the main factors in making information systems outsourcing successful. (10 marks)**
- c) Identify and briefly explain FIVE activities that can foster the IT – business alignment within an organization. (5 marks)**