INFORMATION SYSTEMS MANAGEMENT  
GBAT9106 
SUPERVISED OPEN BOOK EXAMINATION 

Time Allowed: 2 Hours  
Reading Time: 10 Minutes 

INSTRUCTIONS  
1. This is a supervised open book examination. Course study guide, prescribed textbook, self-made notes, pens, pencils and erasers may be brought into the examination room. Laptops and other hand-held electronic devices are not permitted.

2. Your reading time before the examination is 10 minutes. No writing may be undertaken during this period.

3. The examination paper contains five (5) questions. ANSWER ANY FOUR (4) QUESTIONS ONLY. All questions are of equal value.

4. Please begin the answer to each question on a new page in the exam booklet provided and identify the question number you are answering when you do so.

5. Please ensure that you have written your name and student number on every exam booklet used and any other documentation submitted.

6. Answers must be in blue or black ink, however pencil may be used for drawing, sketching or graphical work.

7. This exam paper must be returned with your answer books. No materials are to be retained at the conclusion of the examination.

8. The exam contributes 40% towards your final grading in this course.
Island State case study

Island State covers 20 islands in the South Pacific and has a population of 1.5 million people. It achieved independence in 1985 and managed to maintain a small budget surplus until the Global Financial Crisis in 2008. Due to some risky investments which resulted in considerable losses in 2008-2009, it has had a credit downgrade to the extent that borrowing costs are so high that the Prime Minister has indicated that no new projects will be funded unless the return on investment is greater than 10% or the projects are necessary for the health and welfare of the Islanders. The current total annual budget for Island State is $1.5 billion which includes a budget deficit of $200 million for this financial year. It is anticipated Island State will not return to budget surplus till 2015–2016.

The government currently has five departments: Health, Police, Finance, Education and Transport. Each of these departments has its own small IS/IT department – average staffing of 15 people. IS/IT in each of the departments, except for Finance, has been criticised for being aloof from the business section of its respective departments and not understanding the needs of the business. However the IS/IT section in Taxation has a reasonable relationship with the rest of Finance mainly due to a couple of IS staff who are about to retire who had good personal relationships with key middle managers in the business units of Finance. Despite this, IS/IT in Finance is still seen as a service to the department and not included when formulating business strategy. The current CIO is quite young (35 years) and the son of the Finance Minister. However he has neither formal tertiary education nor any experience with IS/IT before his appointment six months ago. None of the other IS/IT groups has a CIO – in fact the most senior person in any of them is an analyst with 20 years of experience.

The IS systems and infrastructure in the five departments is quite old and has not had significant investment since Island State gained independence. IS/IT in most departments (except Finance) has a poor reputation for delivering any IS/IT project on-time. To make matters worse the projects usually result in cost over-runs of at least 30%.

The Health Department currently runs an old Unix based computer with a well-known relational database system. There are 15 small hospitals currently servicing the needs of the citizens of Island State. Only three of the hospitals have computerised patient medical records while all have computerised patient bill payment services. About a third of Island State’s 1500 doctors have computerised patient records while the remainder use paper based records. Island State does have a state-of-the-art broadband system which was provided by aid money from an overseas government. All of the pharmacies are required to update the central Health Department system with all prescriptions filled on a daily basis. The pharmacies receive payment from the Health Department based on this data.
The Prime Minister has recently attended a regional forum where he talked to the heads of other countries. As a result, he is interested in improving both the management of IS/IT and the application systems as a way of improving productivity of the government of Island State. However the Finance Minister is very mindful of the impact of any additional costs and how it could be funded. Thus he remains very sceptical of any initiatives.
Question 1 (25 marks)
(a) Based on the information provided, please assess the IT alignment maturity of the
Finance department and the other four government departments (i.e. two groups)
using Luftman’s strategic maturity framework. Please remember to justify your
assessments of each of the criteria in the framework as well as your assessment of the
IT maturity level. (15 marks)
(b) Based on your assessment in part (a), please recommend actions that would assist in
improving the IT alignment maturity of the two groups (Finance; and the other four
departments). Please remember to justify your recommendations. (10 marks)

Question 2 (25 marks)
(a) Please discuss the factors that would affect the buy versus build decision for software
acquisition for the government of Island State (15 marks)
(b) Recommend which approach (buy versus build) would be the preferred option for a
new system to manage taxation in the Finance Department. (10 marks)

Question 3 (25 marks)
(a) Please discuss the appropriateness (or otherwise) of implementing an ERP system for
eHealth for Island State. The eHealth system would be responsible for all hospital
systems, patient records, prescriptions, doctors payments, etc. (10 marks)
(b) If an ERP system were to be implemented for eHealth, please recommend and justify
actions that should be considered to maximise the chance of success and user
acceptance whilst minimising overall cost. (15 marks)

Question 4 (25 marks)
(a) The Prime Minister is very keen that Island State is seen as a leader in the Pacific
with respect to carbon emissions. He has ordered all government departments to
lower their carbon footprint by 20% in the next 3 years. Please recommend and
justify three very different and separate initiatives that IS/IT could implement to lower
its carbon footprint. Please also identify any risks associated with each of the
initiatives. (15 marks)
(b) For each of the initiatives in part (a), recommend and justify management actions
aimed at ensuring the success of the initiative proposed. Remember to also address
the risks identified in part (a). (10 marks)

Question 5 (25 marks)
The Prime Minister has requested a report on the possibility of
restructuring/rationalising IS/IT within the government of Island State.
You are engaged as a consultant to recommend the best structure for IS/IT in the
government of Island State. In preparing the report you have no restrictions as to your
recommendations beyond the fact that they offer the best structure in the long term,
are practical and cost effective. The restructuring/reorganising of IS/IT for the five
departments in Island State is included in the brief of looking at IS/IT within the
government of Island State.
Please remember to justify your recommendations, including why alternative
structure(s) were rejected.

END OF EXAM