



**COLLEGE OF BUSINESS AND ECONOMICS
SUPPLEMENTARY EXAM JULY 2018**

DEPARTMENT OF BUSINESS MANAGEMENT

MODULE : IT GOVERNENCE
CODE : BMI9X03
DATE : 24 JULY SUPPLEMENTARY EXAM
DURATION : 2 HOURS
TIME : 12:30 – 14:30
TOTAL MARKS : 100

EXAMINER(S) : PROF KENNEDY NJENGA
(EXTERNAL) MODERATOR: DR BILLY KALEMA (Tshwane University of Technology)
NUMBER OF PAGES : 3 PAGES

INSTRUCTIONS TO CANDIDATES:

- Please answer all questions in **Section A**, **Section B** and **Section C**.
- Question papers must be handed in.
- This is a closed book assessment.
- Read the questions carefully and answer only what is asked.
- Number your answers clearly.
- Write neatly and legibly.
- Structure your answers by using appropriate headings and sub-headings.
- The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

Airline X

Airline X flies to more than 100 destinations in over 60 countries and operates nearly 700 flights per week across six continents. It was launched in 1985 with two leased aircraft from a rudimentary airport. Its phenomenal growth is reflected in the 130-plus aircraft in its rapidly expanding fleet – a mix of the latest wide-body Airbus and Boeing. In addition, it's a major player in the air freight industry, carrying 1.3 million tonnes of cargo in 2008, which amounted to almost 20% of the airline's \$1.37 billion net profit that year. The IT governance department is responsible for the "*Quality at Source*" objective, including process management using CMMI, ITIL and COBIT frameworks, IT performance measurement, portfolio management and IT Strategy, in addition to managing the IT investment portfolio for the company. The initial phase of the COBIT implementation project was the formation of a project team consisting of five members from the security, operations, business consulting, and application development and support units in the IT department. **Airline X** had struggled to identify the tangible and intangible IT assets and their owners. Also it needed to identify the responsible employees of IT processes included in COBIT and a COBIT gap analysis was needed to document existing controls and control deficiencies. The IT Department of **Airline X** needs to also measure the performance of IT processes, as performance measurement is vital for effective IT governance. Some staff members in the IT department have complained that they suspect **Airline X** has not been keeping track of performance of its IT goals. There is also suspected misappropriation of IT equipment and funds.

Airline X had an internally run mechanism for whistleblowing. Its reporting channels included a hotline (which only operated during office hours) and "post box access" to its Chairman to report complaints (only in English). Furthermore, whistle-blowers needed to disclose their complete contact details while registering complaints. Consequently, very few complaints were received and most of these were frivolous.

Source: IT Governance in Airline Industry: A Multiple Case Study. Available from: https://www.researchgate.net/publication/267411217_IT_Governance_in_Airline_Industry_A_Multiple_Case_Study [accessed Apr 06 2018].

<<End of Case>>

QUESTION 1

Illustrate and explain the FIVE elements of CRG governance that **Airline X** should use.

[20 marks]

QUESTION 2

Discuss FIVE ways **Airline X** may launch an effective ethics and whistleblower Strategy.

[20 marks]

SECTION B [CASE STUDY 2]

[15 MARKS]

VIRTUALIZATION

IT virtualization means to create a virtual version of an IT device or, such as a server, storage device, network, or even an operating system where the framework divides the resource into one or more execution environments. Even the common personal practice of partitioning a desktop system hard drive is considered virtualization because you take one drive and partition it to create two separate hard drives. A lot of existing operational and risk policies and control objectives still apply to the virtual world. They may have to be adjusted to fit the dynamics of this new architecture, but they still apply. These include elements common to all servers (physical or virtual), such as configuration, patch management, and security.

QUESTION 3

Describe FIVE unique characteristics of Virtualization that require enterprises to implement new policies and controls.

[15 marks]

SECTION C [MODELS AND ILLUSTRATIONS]

[45 MARKS]

QUESTION 4

Illustrate and explain GRC concepts in modern enterprises.

[15 marks]

QUESTION 5

Illustrate the Zackman Framework of enterprise architecture and show how it could be used for IT Governance.

[15 marks]

QUESTION 6

Illustrate the Capability Maturity Model and how it could assist enterprise IT Governance efforts.

[15 marks]