UNIVERSITY
OF
JOHANNESBURG

PART 1

FACULTY/COLLEGE	College of Business and Economics
SCHOOL	School of Accountancy
DEPARTMENT	Accountancy
CAMPUS(ES)	APK
MODULE NAME	Computer Securities and Business Continuity
MODULE CODE	SCB9X02
SEMESTER	Second
ASSESSMENT OPPORTUNITY, MONTH AND YEAR	Final Assessment opportunity November 2019

ASSESSMENT DATE	9 November 2019	SESSION	08:30 – 14:00
ASSESSOR(S)	Mr Johan van Graan		
MODERATOR(S)	Mr H Zulch		
DURATION	5 hours and 30 minutes There is a 30 minute break between part A and part B.	TOTAL MARKS	200 marks

NUMBER OF PAGES OF QUESTION PAPER (Including cover page)	8

INFORMATION/INSTRUCTIONS:
_____
- This paper consists of 7 pages.
- There are **2 parts in this question paper**.
    o Part 1 – page 2;
    o Part 2 – pages 3 to 7;
    o Part 1 – 08H30 to 10H30 – close book assessment;
    o Part 2 – 11H00 to 14H00 – open book assessment.
- Read the questions carefully and answer only what is asked,
- Number your answers clearly. You answer the questions in the examination books provided or on your laptop. If you use your laptop please ensure that you use a header - your name and student number - and a footer -page x of xx. Save your answer under your name and student number.
- Write neatly and legibly.
- Structure your answers by using appropriate heading and sub-heading.
- Please hand back your question papers.
- All the examination regulations of UJ and the policy document for students of the Department of Accountancy will apply before, during and after this test.

QUESTION 1 *(20 Marks)*

Three main business resumption approaches are normally contained in Business Continuity Plans.

You are required to name and explain each of the three approaches.

(20 marks will be awarded for the content, and 0 marks for the format.)

QUESTION 2 *(20 Marks)*

In a manual accounting system division of duties is achieved by keeping sub-ledgers and having different people writing them up. In a real-time online accounting application, this is not always possible.

You are required to explain how division of duties is achieved in an accounting application. (Use examples to illustrate your argument)

(20 marks will be awarded for the content, and 0 marks for the format.)

QUESTION 3 *(20 Marks)*

You are a consultant of GHI (Pty) Ltd. GHI (Pty) Ltd will start Operations in three months time. GHI (Pty) Ltd will be a manufacturer of FMCG (Fast Moving Consumer Goods) and be reliant on computer systems for day-to-day operations. The audit committee want to ensure that proper IT policies and procedures will be implemented.

Write a report explaining the items that from an IT security perspective should be included in the proposed IT policies and procedures.

(18 marks will be awarded for the content of the report, and 2 marks for the format of the report.)

QUESTION 4 *(20 Marks)*

A. Discuss and explain the advantages/disadvantages of changing business processes rather than customising the software being implemented. (10)
B. Discuss and explain the advantages/disadvantages of customising software to fit existing business practices. (10)

(20 marks will be awarded for the content of your answer, and 0 marks for the format.)

PART 2

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QUESTION 5   *(70 Marks)*

You are the newly appointed BCM Manager for Pronto Manufacturing Limited. (This is a new position). Pronto manufactures components for machinery in the mining industry. The administrative office is in Rosebank in Johannesburg. One production plant is in Vereeniging and the other in Roslyn (Pretoria).

The following people, systems, facilities are at each of the locations:

Administration office:
- This office block is leased with 5 years of the lease remaining.
- Pronto is the only tenant.
- The office block has space for 200 staff and parking for 40 cars
  - In the basement of the office block there is a computer room with 40 square meter space that is 50% utilised by a Unix server that have the following applications on it:
    - E-mail;
    - ERP (Accounting, payroll, HR and Stock);
    - Production planning;
    - A Marketing and Sales application that is linked to the Pronto Internet page. About 40% of sales are generated and placed on the internet.
- The office block has its own generator with diesel for 48 hours.
- The office block is currently occupied by 180 staff (senior management, marketing, sales, HR, accounting, IT, and production planning staff.

Vereeniging plant:
- This facility is owned by Pronto.
- This is a manufacturing plant with two production lines.
  - Currently 400 workers work in the plant itself;
  - One of the lines runs a day and night shift of 10 hours each, 5 days a week;
  - The second line runs a 10-hour day shift 5 days a week only;
  - Occasionally weekend shifts are needed to produce stock for big orders.
- Components used in the gold mines are manufactured at this plant.
  - The plant has an office block on the side:
    - The office block has space for 80 people (currently occupied by 20 production support staff);
    - The office block also have a computer room with 60 square meter space that is 40% utilised by two Unix servers:
      - The first server controls the two production lines. This server can control up to 6 production lines;
      - The second is a test server. This server has not been used in the last 6 months;
    - The office block has its own generator with diesel for 48 hours.

- The manufacturing plant has its own generator with diesel for 120 hours.
- The facility also have a warehouse that is 80% full and houses raw materials used in production and stock ready for shipment.
  - The raw materials are sufficient for 2 weeks normal production;
  - The stock is for about 2 months normal sales.

Roslyn plant:

- This facility is on ground that is leased from a mine in terms of a 15-year lease. 10 years of the lease remains.
- This is a manufacturing plant that operates with two production lines.
  - Currently 180 workers work in the plant itself;
  - One of the lines runs a day and night shift of 12 hours each, 5 days a week;
  - The second line runs an 8-hour day shift 5 days a week only;
  - Occasionally weekend shifts are needed to produce components for big orders;
  - Components used in the coal mines are manufactured at this plant.
- Off the 180 workers about 60 lives in a hostel on the premises. This old mine hostel and has space for 100 people.
- The plant has an office block on the side.
  - The office block has space for 50 people (currently occupied by 15 production support staff);
  - The office block also have a computer room with 50 square meter space that is 20% utilised by a Unix server that controls the two production lines. This server can control up to 6 production lines;
  - The office block and hostel shares a generator with diesel for 48 hours;
  - The manufacturing plant has its own generator with diesel for 120 hours;
  - Also on the premises is another office block that can house 50 staff and another hostel that can house 100 people:
    - These two buildings were in working order when the mine leased it to Ponto 5 years back;
    - Part of the lease agreement is that Pronto must annually ensure that the utilities (water and electricity) for these buildings are in working order.
  - The facility also have a warehouse that is 40% full and houses raw materials used in production and stock ready for shipment.
    - The raw materials are sufficient for 6 weeks normal production;
    - The stock is for about 4 month normal sales.

You are required to:

Part A   *(45 Marks)*

The MD asked you to do a scenario planning exercise. You are required to outline recovery strategies **using existing premises and systems** assuming the following scenarios provided by the MD:
- The office block is flooded and needs to be vacated for 30 days.

- All the buildings on the Vereeniging facility is damaged in a fire and it will take 18 months to rebuild.
- The Roslyn foundations of the manufacturing plant are damaged due to an earth tremor that created a sinkhole. It will take 3 months to convert a part of the warehouse to a plant.

Note: Assume that only one of the three scenarios happen at a given time

Part B   (25 Marks)

Provide the MD with suggestions on how you can improve your plans above provided you allowed to spend a reasonable amount of Capex and Opex.

(68 marks will be awarded for answer and 2 marks for the format)

QUESTION 6   (20 Marks)

You are the internal auditor of RightFix (Pty) Ltd a company with 20 nation-wide franchises in the cell phone repair business. The franchises have to purchase all their spares from RightFix. Repairs that they cannot do are sent by courier to an advanced repair centre in Johannesburg managed and owned by RightFix.

For each repair a job card is opened. On the job card the type of repair and the spares used are recorded. From the job card an invoice is produced using a standard labour rate per type of repair and spares are charged at cost plus 20%. When a job is sent to Johannesburg, this is recorded in a spreadsheet.

To earn additional income the franchises sells accessories such a cell phone batteries, walk & talks, etc.

The Managing Director (MD) wants to automate this system by buying a package that can perform point-of-sale transactions and handle the tracking and costing of repair jobs. In addition, the system should also keep record of accessory and spares stock. The system does not need to handle debtors and other accounting functions.

The MD requests you to provide him with a guideline as to how the process should work to evaluate and install an integrated real-time system at head office, the advance repair centre and in the 20 franchises. (13 marks will be awarded for the content of the report, and 2 marks for the format of the report.) (IN YOUR ANSWER MARK THIS AS 6.1)

He also instructs the Operations manager to draw up a Business Requirement Specification.

After reading your report he asks you to explain how the guidelines will change if he appoints a software house to develop the system from scratch, rather than buying a package. (5 marks) (IN YOUR ANSWER MARK THIS AS 6.2)

QUESTION 7A   (10 Marks)

You are the external auditor of XYZ. (Pty) Ltd. XYZ (Pty) Ltd runs 6 UNIX boxes. They run an accounting system called PACACT on two of the UNIX boxes. The one box host the live accounting system and a Sequel Database containing the accounting data. The second box is the partitioned into Test and DRP for PACACT.

During the prior year the two boxes running PACACT were not connected to a LAN or the Internet. The security settings on the UNIX boxes running PACACT were audited and found to be good.

Two of the boxes are used as mail servers and the last two are used in the production environment.

During the current year the two PACACT boxes were linked to the LAN. The mail servers are also linked to a Windows XP box, which is connected to the Internet. A firewall is installed on the Windows box.

There is the following weakness in the security of the operating systems:
- The passwords of the system administrators of the mail servers are set to never expire.

You are required to:

a) Explain why it is a weakness.   (2)
b) List what alternate (compensating) controls you will look for that may mitigate security weakness.   (4)
c) Discuss the impact of the weakness on the audit of the security of the LAN and PACACT Application.   (4)

QUESTION 7B   (10 Marks)

The same information as question 7A applies.

There is the following weakness in the security of the operating systems:
- All the users of the two production boxes have root access.

You are required to:

a) Explain why it is a weakness.   (2)
b) List what alternate (compensating) controls you will look for that may mitigate security weakness.   (4)
c) Discuss the impact of the weakness on the audit of the security of the PACACT Database.   (4)

QUESTION 7C   (10 Marks)

The same information as question 7A applies.

There is the following weakness in the security of the operating systems:
- When changes are made in the test environment of the PACACT environment the live database are dumped to use in the testing.

You are required to:

- Explain why it is a weakness.   (2)
- List what alternate (compensating) controls you will look for that may mitigate security weakness.   (4)
- Discuss the impact of the weakness on the audit of the security of the PACACT Application.   (4)