UNIVERSITY OF ESWATINI

FACULTY OF COMMERCE
DEPARTMENT OF BUSINESS ADMINISTRATION

MAIN EXAMINATION – MAY 2019

COURSE TITLE	: MANAGEMENT INFORMATION SYSTEMS II
COURSE CODE	: BUS212 / BA212 - IDE
PROGRAMMES	: B.COM II (F.T); B.ED II (F.T); B.Sc.- I.T. (F.T) B.COM LEVEL 3(IDE), B.ED LEVEL 2 (IDE),
TIME ALLOWED	: THREE (3) HOURS

INSTRUCTIONS:

1. THIS PAPER CONSISTS OF SECTION (A) AND (B)

2. SECTION (A) IS COMPULSORY. TOTAL MARKS **25**

3. ANSWER ANY THREE (**3**) QUESTIONS FROM SECTION B.
   TOTAL MARKS **75**

4. THE TOTAL NUMBER OF QUESTIONS IN THIS PAPER IS SIX (6)

5. THE TOTAL NUMBER OF PAGES, INCLUDING COVER PAGE, IS EIGHT (8).

NOTE: MARKS AWARDED WILL ALSO BE INFLUENCED BY GOOD COMMUNICATION IN ENGLISH AS WELL AS ORDERLY PRESENTATION, ESPECIALLY WHERE STATED.

THIS EXAMINATION PAPER SHOULD NOT BE OPENED UNTIL INVIGILATOR HAS GRANTED PERMISSION

SECTION A. - COMPULSORY

Your high school Principal meets you on the streets on Manzini. You and he exchange pleasantries and during the catching up you inform him that you are actually doing a course in systems analysis and design. He gets excited and informs you that your community library is planning to automate its operations. Later that week, you meet him and he explains the library processes for you. Your summary notes of the discussion are as follows:

When one wants to join the library, this prospective member fills in an application form. The librarian processes the application form and issues a library card (and hereafter the prospective member becomes a member). The member browses a catalogue and finds a loan item (it could be a book, magazine, video, DVD etc.). The member borrows the loan item by giving their library card plus the loan item to the librarian. The librarian records the borrowings and returns the card and loan items to the borrower. At some future date, the borrower returns the borrowed items to the library. The Librarian checks in the items. The member may also reserve a loan item or arrange an interlibrary loan from another library. When these items become available at the library, the requesting member is notified.

The librarian, who is also a member, maintains the catalogue. The librarian gets a list of the latest items from distributors during the month. At month end, the librarian creates an order for the distributors. When the items arrive the librarian labels them and makes them available in the catalogue.

In the proposed online system, the member will simply log-in using their credentials and browse the catalogue for loan items they wish to place on hold (i.e. reserve/book). The system will check if the credentials match those in the Customer database as well as check in the Items data if the item being requested is available or out. For those available, the system will check if the dates required by the member do not conflict with any existing booking. Where there is a conflict the system will inform the member of the available dates of that loan item. Should the loan item be unavailable, the system will send a request to other libraries [interlibrary loan] and thereafter inform the member of the available dates, based on the information received from the other libraries. Once the member has been informed (any of the responses), the member may confirm the dates being suggested or decline to make the reservation, thereafter terminate the session (log-out of the system).

Question 1

A. Draw the dataflow diagram of the proposed system **[13 marks]**

B. Draw an activity diagram of the proposed system. **[12 marks]**

SECTION B. – ANSWER ANY 3 QUESTIONS

Question 2

Discuss the concept of prototyping as a systems development tool. Discuss only **four** such prototypes, providing a scenario example for each. ***Use the following tabular layout*** to present your work.

Prototype (1 mark)	Discussion of the prototype (3 marks)	Example of that prototype (2 marks)
1.		
2.		

(25 marks)

Question 3

Using the **four** different forms of feasibility, explain what feasibility analysis is and its importance in the systems development process. ***Use the following tabular layout*** to present your work

Type of feasibility (1 mark)	What it is. (2 marks)	Why it is important in the systems development process. (3 marks)

(25 marks)

Question 4

Confidential information for a local college was discovered to have leaked to students and other unauthorised persons outside the college.

A. How could this have happened? Suggest and explain three possible breaches of security.
B. Suggest three possible control mechanisms to this end, explaining specifically how control would help

Use the following tabular layout to answer this question.

Possible security breach (2 marks each)	Control Mechanism to put in place (2 marks each)	How / Why this control measure would be helpful. (4 marks each)

(25 marks)

Question 5

Discuss five IT ethical issues that become a source of major debate, and suggest best practise where possible. ***Use the following tabular layout*** to answer this question.

Ethical issue (1 mark)	Discussion of the issue (2 marks)	Suggestion on how best to handle it (2 marks)

(25 marks)

Question 6

Fill in the blanks or choose the correct option where you are given a choice

1. In the SDLC methodology, the systems controls and security are handled in the (a)_____ _____ phase, the evaluating of system performance can be done at the (b)_____ ___phase, and Integration testing happens in the (c)_____phase.

2. A feasibility study is carried out
   A. After final requirements are drawn up.
   B. At any time during the feasibility analysis stage.
   C. During the period when requirements are being drawn up.
   D. Before the final requirements are drawn up.

3. Which of the following does **not** occur in the implementation phase of the SDLC?
   A. Implementing system back-up procedure.
   B. Training users.
   C. Tweaking user roles.
   D. Programming.

4. Determining if the walls allow for wifi technology would be an activity undertaken as part of
   A. The decision on which system conversion method to use.
   B. The infrastructure analysis in the analysis stage.
   C. The technical feasibility.
   D. The design of the system.

5. The make-or-buy decision is associated with the .....phase of the SDLC
    A. System analysis
    B. Feasibility analysis
    C. This decision is always evaluated in all these three phases.
    D. Design

6. The key responsibilities of the system analyst include, amongst other things;
    i. Defining and prioritizing information requirements for an organisation
    ii. Gathering data, facts, and opinions of users of the organisation
    iii. Drawing up specifications of the system for the organisation
    iv. Designing, testing, and evaluating the system
    A. ii, iii, and iv
    B. ii and iii
    C. i, ii, iii, and iv
    D. i, ii, and iii

7. UPINFLAMES was evaluating key reasons for their failed project. They noted that they had created a 5-person project team. Their roles being 3 accountants, one change agent, and a project manager with a marketing background. UPINFLAMES expected this team to develop a WAN that would incorporate the 5 regions that their organisation operated in. Clearly this was a poorly staffed project team. At what phase of the SDLC was this mistake probably committed?

    A. Design - where the technical details become very necessary
    B. Budgeting and scheduling - when they were planning out the work to be done.
    C. System investigation - when they were expected to understand the current system
    D. Feasibility - when they realised the project was possible to do
    E. Resource allocation - when they were allocating duties and roles

8. Paragraph 1 of the client document discussed how the data would be stored within the system. It explained which type of file structures the system would use as well as the mode of processing that would occur, including the manual processes involved in the conversion of the data. Paragraph 2 discussed how the processes were related to each other as well as

to the other elements of the system. It explained in detail the kind of inputs and outputs required for each process as well as the location of any data that was to be used.

Paragraph 1 discussed the (a)_____view of the system and Paragraph 2 discussed the (b)_____ view of the system.

9. Which of the following is the most effective method for reducing security risks associated with building entrances?
   A. Minimize the number of entrances
   B. Use solid metal doors and frames
   C. Brightly illuminate the entrances
   D. Install tamperproof hinges and glass

10. In business continuity planning, which of the following is an advantage of a "hot site" over a "cold site"?
   A. Air Conditioning
   B. Cost
   C. Short period to become operational
   D. More space to work
   E. Up-to-date and effective communication systems

11. Copyright provides what form of protection:
   A. Protects an author's right to distribute his/her works.
   B. Protects information that provides a competitive advantage.
   C. Protects the right of an author to prevent unauthorized use of his/her works.
   D. Protects the right of an author to prevent viewing of his/her works.

12. Which of the following refers to a series of characters used to verify a user's identity?
   A. Token serial number
   B. User ID
   C. Password
   D. Security ticket

13. Which of the following virus types changes its characteristics as it spreads?

A. Trojan virus

B. Parasitic virus

C. Boot sector virus

D. Polymorphic virus

14. If risk is defined as "the potential that a given threat will exploit vulnerabilities of an asset or group of assets to cause loss or damage to the assets" the risk has all of the following elements except?

A. An impact of assets based on threats and vulnerabilities.

B. Controls addressing the threats.

C. Threats to and vulnerabilities of processes and/or assets.

D. Probabilities of the threats.

15. A dashed line drawn around a process or group of processes that should be placed in a single computer program depicts;

A. All of these are shown by a dashed line

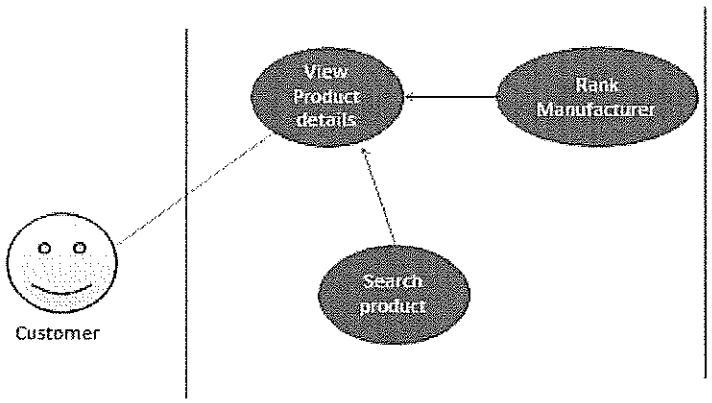
B. A process (es) that may or may not be developed in the new system

C. A process (es) that is not necessary in the current system

D. A process (es) that the system analyst did not clearly understand

E. A data flow diagram partition

16. Based on the following use case;



A. Search product has an <includes> relationship with View product details and Rank manufacturer has an <extends> relationship with View product details

B. Search product has an <extends> relationship with View product details and Rank manufacturer has an <includes> relationship with View product details

C. View product details has an <includes> relationship with Search product and an <extends> relationship with Rank manufacturer.

D. View product details has an <extends> relationship with Search product and an <includes> relationship with Rank manufacturer.

17. (a)_____ diagrams are used to describe the logic of an operation, whereas (b)_____ diagrams are used to show the user's interaction with the system, and (c)_____ diagrams are used to present a graphic picture of the system.
18. Business Analysts have an important role of developing specifications and diagrams for programmers to follow. **True / False?**
19. The Context Diagram, also known as Level 0, is the highest level of data flow diagramming. **True / False?**
20. Incorrect decisions on the development approach to undertake happens in the design phase. **True / False?**

Total Marks [25 marks]