



<b>FACULTY/COLLEGE</b>	College of Business and Economics
<b>SCHOOL</b>	School of Consumer Intelligence and Information Systems
<b>DEPARTMENT</b>	Applied Information Systems
<b>CAMPUS(ES)</b>	DFC
<b>MODULE NAME</b>	Systems Analysis and Design
<b>MODULE CODE</b>	BSO11B1/SAD01B1
<b>SEMESTER</b>	Second
<b>ASSESSMENT OPPORTUNITY, MONTH AND YEAR</b>	Supplimentary Summative Assessment Opportunity, December 2019

<b>ASSESSMENT DATE</b>	To be announced	<b>SESSION</b>	December
<b>ASSESSOR(S)</b>	Mrs M. Tshabalala		
<b>MODERATOR(S)</b>	Mr T. Museba		
<b>DURATION</b>	2 hours (120 min)	<b>TOTAL MARKS</b>	100

<b>NUMBER OF PAGES OF QUESTION PAPER (Including cover page)</b>	6
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### INFORMATION/INSTRUCTIONS:

- Answer **ALL** questions.
- 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.

**QUESTION 1: MULTIPLE CHOICE**

**[20 Marks]**

*Identify the choice that best completes the statement or answers the question e.g. 1.1 D*

1.1 The combination of hardware, software, and services used by people to manage, communicate and share information is\_\_\_\_\_.

- |                                |                       |
|--------------------------------|-----------------------|
| A. Systems analysis and design | B. Information System |
| C. Information Technology      | D. Information        |

1.2 A step by step process for developing high-quality information systems is\_\_\_\_\_.

- |                                |                       |
|--------------------------------|-----------------------|
| A. Systems analysis and design | B. Information System |
| C. Information Technology      | D. Information        |

1.3 \_\_\_\_\_is a combination of technology, people and data to provide support for business functions.

- |                                |                       |
|--------------------------------|-----------------------|
| A. Systems analysis and design | B. Information System |
| C. Information Technology      | D. Information        |

1.4 Data that has been transformed into output that is valuable to users is\_\_\_\_\_.

- |                                |                       |
|--------------------------------|-----------------------|
| A. Systems analysis and design | B. Information System |
| C. Information Technology      | D. Information        |

1.5 A \_\_\_\_\_is a set of related components that produces specific results.

- |                |                    |
|----------------|--------------------|
| A. Data        | B. System          |
| C. Information | D. Systems analyst |

1.6 A member of IT department team who helps plan, develop, and maintain information systems

- |                |                    |
|----------------|--------------------|
| A. Data        | B. System          |
| C. Information | D. Systems analyst |

1.7 The Software & Information Industry Association and many software industry leaders, including Microsoft, believe that the concept of \_\_\_\_\_is redefining the way that companies develop and deploy their information systems.

- |                          |                            |
|--------------------------|----------------------------|
| A. software as a service | B. hardware as a help      |
| C. storage as a solution | D. processing as a product |

1.8 \_\_\_\_\_are systems that provide job-related information support to users at all levels of a company

- |                              |                                   |
|------------------------------|-----------------------------------|
| A. User-productivity systems | B. Transaction processing systems |
| C. Business support systems  | D. Mission-critical systems       |

1.9 \_\_\_\_\_are systems that process data generated by day-to-day business operations

- A. User-productivity systems
- B. Transaction processing systems
- C. Business support systems
- D. Mission-critical systems

1.10 \_\_\_\_\_are systems vital to the company's operations

- A. User-productivity systems
- B. Transaction processing systems
- C. Business support systems
- D. Mission-critical systems

1.11 A structured analysis\_\_\_\_\_.

- A. Combines data and processes that act on the data into things called objects
- B. Uses a series of phases to plan, analyse, design, implement and support an information system
- C. Attempts to develop a system incrementally and constantly adjusting user requirements
- D. Represents a series of iterations or revisions based on user feedback

1.12 A business case refers to \_\_\_\_\_.

- A. A process of identifying long-term organization goals, strategies and resources
- B. A series of phases to plan, analyse, design, implement and support an information system
- C. The reasons or justification for a project proposal
- D. An objective that must be achieved to fulfil the company's mission

1.13 A business case answers the below questions, except?

- A. What the project is about?
- B. How will the project success be measured?
- C. What alternatives exists?
- D. What data will go in and out of the system

1.14 When projects have general scope definitions, and are at risk expanding gradually without specific authorizations is referred to\_\_\_\_\_.

- |                  |                    |
|------------------|--------------------|
| A. Project creep | B. Fact-finding    |
| C. Constraint    | D. Case for action |
- 1.15 Requirements Modelling process identifies the\_\_\_\_\_for the new system.
- |                |                     |
|----------------|---------------------|
| A. Process     | B. Input/output     |
| C. Performance | D. All of the above |
- 1.16 All of the following are techniques to fact-finding process of collecting system information except\_\_.
- |                  |                 |
|------------------|-----------------|
| A. Documentation | B. Research     |
| C. Interviews    | D. Observations |
- 1.17 In Data and process modelling, a(n)\_\_\_\_model shows what the system must do, regardless of how it will be implemented physically
- |               |               |
|---------------|---------------|
| A. Physical   | B. Relational |
| C. Interviews | D. Logical    |
- 1.18 Data and process modelling involves the below three main tools except \_\_\_\_\_?
- |                        |                    |
|------------------------|--------------------|
| A. Process Description | B. Data dictionary |
| C. Data flow diagrams  | D. Sampling        |
- 1.19 A\_\_\_\_\_documents the details of a functional primitive and represents a specific set of processing steps and business logic.
- |                        |                    |
|------------------------|--------------------|
| A. Process Description | B. Data dictionary |
| C. Data flow diagrams  | D. Sampling        |
- 1.20 A\_\_\_\_\_is a graphical representation of the conditions, actions, and rules found in a decision table.
- |              |                  |
|--------------|------------------|
| A. Sequence  | B. Looping       |
| C. Selection | D. Decision tree |

**QUESTION 2: MATCHING****[10 marks]**

- |                                  |                       |
|----------------------------------|-----------------------|
| A. Data flow Diagram             | F. Scalable           |
| B. Intangible benefits           | G. Processes          |
| C. System requirements documents | H. Strategic planning |
| D. Fact-finding                  | I. Stakeholders       |
| E. Business Case                 | J. System requirement |

2.1 describes the tasks and business functions that users, managers, and IT staff members perform to achieve specific results

2.2 A design that can expand to meet new business requirements and volumes.

2.3 Advantages that are difficult to measure in dollars but are important to the company.

2.4 Reasons or justifies the proposal for the new system.

2.5 People who have an interest in an information system.

2.6 Deliverable for the systems analysis phase.

2.7 A characteristic or feature that must be included in an information system.

2.8 A process of collecting information for the proposed system.

2.9 Shows how data moves through an information system but does not show the processing logic.

2.10 A process of identifying long-term organizational goals strategies and resources.

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**QUESTION 3****[20 marks]**

Systems' planning is the first of five phases in the systems development life cycle.

3.1 Structured Analysis uses the SDLC to plan and manage the systems development process. The SDLC describes activities and functions that all systems developers perform, regardless of which approach they use. The SDLC waterfall model shows the phases and deliverables of the SDLC. **Draw** this model.

**(Marks will be allocated for the phases and corresponding deliverables of each phase only)**

(10)

3.2 Internal and external factors affect every business decision that a company makes, IT systems projects included. Outline any **FOUR** external factors that could affect IT systems projects. (4)

3.3 A systems request must pass several tests, called a feasibility study, to see whether it is worthwhile to proceed further. Identify and give brief descriptions of **FOUR** types of feasibility tests. (8)

#### QUESTION 4

[20 marks]

During systems' planning, it is imperative to perform a thorough preliminary investigations for the proposed system, and this includes conducting different processes.

4.1 Explain the concept of SWOT analysis as one of systems planning processes conducted, and give relevant examples? (4)

4.2 Identify **SIX** main reasons for systems requests? (6)

4.3 Describe the **SIX** steps in a typical preliminary investigation? (6)

4.4 Identify any **FOUR** fact finding techniques used to gather project data? (4)

#### QUESTION 5

[30 marks]

During the system implementation phase of the SDLC, one of the processes involved is the Applications development process, whereby the programs and code modules that serve as the building blocks of the information system are constructed.

5.1 Outline the **SEVEN** tasks involved in creating systems design? (7)

5.2 Identify and show in detail the main steps in application development? (9)

5.3 List and describe the **THREE** types of testing done during systems implementation phase (6)

5.4 Describe the **FOUR** types of system changeover a company can use while putting the newly constructed system online and retiring the old system? (8)

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**THE END**