NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATICS

QUALIFICATION : Bachelor of Information Technology (Business Computing) Bachelor of Information Technology (Systems Administration & Networks) Bachelor of Informatics Bachelor of Logistics & Supply Chain	
QUALIFICATION CODE: 80BSBC / 80BSAN / O7BAIF / O7BLS	COURSE LEVEL: NQF LEVEL 7
COURSE: Enterprise Resource Planning Systems	COURSE CODE: ERP720S
DATE: November 2019	SESSION: 1
DURATION: 2 Hours	MARKS: 80

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S):	Dr Edmore Chikohora Mr Johnson Billawer
MODERATOR (S):	Dr Victoria Hasheela-Mufeti

THIS EXAMINATION QUESTION PAPER CONSISTS OF 6 PAGES
(INCLUDING THIS FRONT PAGE)

Instructions for the students

1. Answer ALL the questions.
2. Write clearly and neatly.
3. Number the answers clearly.

SECTIONA: Multiple Choice Questions. Marks for each question are shown at the end. Choose the correct answer(s)

[Total Marks 20]

1. Which enterprise systems architecture enable direct communication between the client computer and the server without any intermediate between client and server? **[1 Mark]**

    A. Three-tier architecture
    B. SaaS
    C. Two-tier architecture
    D. One-tier architecture
    E. Internet

2. The _____implementation strategy is possible with a decentralised organisation.

[1 Mark]

    A. Big bang
    B. Parallel
    C. Wave
    D. Roll out
    E. Function oriented

3. Which of the following extra module or function is added into ERP II or second generation ERP products? (choose two correct answers) **[2 Marks]**

    A. Social Media
    B. SRM
    C. SaaS
    D. MRP
    E. CRM

4. At which stage of ERP implementation does the organisation need to produce a business blueprint of how it intends to run its business processes with the ERP system? **[1 Mark]**

    A. System design
    B. Build and test
    C. Deploy
    D. Operate
    E. Requirement

5. In SAP ERP a _____can be a manufacturing facility, a warehouse or a distribution centre or an office from which services are rendered. **[1 Mark]**

    A. Client
    B. Storage locations
    C. Plant
    D. Company code
    E. Purchasing organisation

6. A purchase info record is derived from which of the following master records? (select two correct answers) **[2 Marks]**

    A. Vendor
    B. Output
    C. Conditions
    D. Material
    E. Terms of payments

7. Select two material master views needed in the procurement process. **[2 Marks]**

    A. Purchasing organisation
    B. Purchasing information record
    C. Basic data
    D. Purchasing data
    E. Goods receipt

8. You are explaining how the procurement cycle in SAP ERP integrates with SAP Financial Accounting to a friend. Which procurement cycle business transaction in SAP ERP creates a financial accounting document? There are three (3) correct answers. **[3 Marks]**

    A. Post a goods receipt with change in material valuation
    B. Create a vendor master record
    C. Create vendor payment
    D. Enter an invoice receipt
    E. Create a purchase requisition

9. A sales area is an important organizational unit in SAP ERP and especially in the SAP SD application. Which of the following statements are false regarding sales areas? There are three (3) correct answers. **[3 Marks]**

    A. A sales area is a unique combination of sales organization, distribution channel and division.
    B. A sales area is a unique combination of sales organization, distribution channel and shipping point.
    C. A sales area is a combination of shipping point, distribution channel and division.
    D. A sales area is assigned to exactly one company code.
    E. A sales area is assigned to exactly one plant.

10. Which of the following transactions can increase the value of inventory in a company? There are two (2) correct answers. **[2 Marks]**

    A. Purchase order
    B. Goods issue
    C. Goods receipt
    D. Post stock count
    E. Purchase requisition

11. In the material master record, stocks are managed at _____ and _____ level.

[2 Marks]

    A. Company code
    B. Plant
    C. Client
    D. Storage-location
    E. Purchase requisition

SECTION B: Structured Questions. Marks for each question are shown at the end.

[Total Marks 60]

QUESTION 1 **[18 Marks]**

Assume you are hired by Zambikes company to manage the procurement process. You will perform different roles within the company such as: purchasing agent, warehouse employee, and an accounting specialist.

    a) Illustrate the standard view of steps involved in the procure to pay process using the SAP ERP system. **[4 Marks]**

    b) Identify the organisational structure/units required to support the procure to pay process. **[3 Marks]**

    c) You received a request from the production unit to purchase 10 Brake kit:
    i) Which document will you create in an ERP system to request for the 10 Brake kit from suppliers? **[1 Mark]**

    ii) Which document will you create in an ERP system to receive the 10 Brake kit from suppliers? **[1 Mark]**

    iii) Explain the effects of the document you created in Question c (ii). **[5 Marks]**

    d) As a Purchasing Agent for Zambikes company.
    i) What risks in the procurement process will you consider when receiving goods? **[2 Marks]**

    ii) How will you eliminate the risks you stated in Question d (i)? **[2 marks]**

QUESTION 2   [16 Marks]

Analyse the scenario below and answer questions A and B.

An organisation adopted SAP R/3 system. The users in this organisation access SAP R/3 through a SAP GUI (Front-End), Application server, then the Database server.

a) Which enterprise system architecture is represented in the scenario above?   [1 Mark]

b) Explain any three advantages of this enterprise system architecture. Please note that only one architecture type is represented in the scenario above.   [3 Marks]

c) Briefly explain how ERP adopters and ERP Vendors influence new ERP functionalities.

[4 Marks]

d) Which four ERP data types are critical to any ERP system?   [4 Marks]

e) Briefly discuss how an ERP adopter achieve business and data integration by using an ERP system.   [4 Marks]

QUESTION 3   [26 Marks]

a) Use the scenario below to answer the questions that follow:

Assume a customer placed an order for products at your company. However, your company does not have the products and it would take three (3) calendar days to have the products (material availability) in stocks from the day of order placement. You are further informed that the order is due in 6 days, and the customer required delivery date is on the 6th day (Day 1, Day 2........Day 6). Since all the machines are available you would like to start the production of these products immediately on Day 1:

   i) On which day will the production of the new products be completed?   [1 Mark]

   ii) On which day will you dispatch the products to the customer?   [1 Mark]

   iii) Which sales order scheduling approach is followed in the scenario?   [2 Marks]

   iv) Justify your choice of approach in iii).   [2 Marks]

b) The shipping process begins when you create the delivery document for the sales order. Discuss the four sub-process for the shipping process. **[8 Marks]**

c) *Assume you own a grocery retail and hired four employees to assist you in managing the daily activities. The business has two warehouses for storing all the products received from suppliers.*

i) Why will it be important for you to manage inventory in the shop? **[4 Marks]**

ii) On a particular day, the following transactions occurred in your business. Analyse each statement below and state what type of goods movement is involved.

a) You purchased 20 products from your supplier and re-sell 15 of the products to a customer. **[4 Marks]**

b) You detected that two products are damaged, hence they will not be usable in the business. **[2 Marks]**

c) You transferred some products from one warehouse to the other. **[2 Marks]**

THE END OF EXAM

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FIRST OPPORTUNITY EXAMINATION PAPER	
EXAMINER(S):	Dr Edmore Chikohora Mr Johnson Billawer
MODERATOR (S):	Dr Victoria Hasheela-Mufeti

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COURSE: Enterprise Resource Planning Systems	COURSE CODE: ERP720S
DATE: January 2020	SESSION: 2
DURATION: 2 Hours	MARKS: 80

SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION PAPER	
EXAMINER(S):	Dr Edmore Chikohora Mr Johnson Billawer
MODERATOR (S):	Dr Victoria Hasheela-Mufeti

THIS EXAMINATION PAPER CONSISTS OF 7 PAGES
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COURSE: Enterprise Resource Planning Systems	COURSE CODE: ERP720S
DATE: November 2019	SESSION: 1
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FIRST OPPORTUNITY EXAMINATION MEMORANDUM	
EXAMINER(S):	Dr Edmore Chikohora Mr Johnson Billawer
MODERATOR (S):	Dr Victoria Hasheela-Mufeti

THIS EXAMINATION PAPER CONSISTS OF 7 PAGES

(INCLUDING THIS FRONT PAGE)

Instructions for the Instructor/Moderator

1. Please use the memorandum or sample solutions to guide your marking.
2. When marking questions you should be guided by the allocation of marks.
3. Sample answers or solutions appear in bold.
4. Reasonable, in depth or innovative correct solutions provided by the students should be allocated marks even though not provided in this memorandum

SECTIONA: Multiple Choice Questions. Marks for each question are shown at the end.

[Total Marks 20]

1. Which enterprise systems architecture enable direct communication between the client computer and the server without any intermediate between client and server?   [1 Mark]

    A) Three-tier architecture

    B) SaaS

    C) Two-tier architecture

    D) One-tier architecture

    E) Internet

Answer C

2. The _____implementation strategy is possible with a decentralised organisation.   [1 Mark]

    A) Big bang
    B) Parallel
    C) Wave
    D) Roll out
    E) Function oriented

Answer D

3. Which of the following extra module or function is added into ERP II or second generation ERP products? (choose two correct answers)   [2 Marks]

    A) Social Media
    B) SRM
    C) SaaS
    D) MRP
    E) CRM

Answer B, E

4. At which stage of ERP implementation do the organisation needs to produce a business blueprint of how it intends to run its business processes with the ERP system?   [1 Mark]

    A) System design
    B) Build and test
    C) Deploy
    D) Operate
    E) Requirement

Answer A

5. In SAP ERP a _____ can be a manufacturing facility, a warehouse or a distribution centre or an office from which services are rendered. **[1 Mark]**

     A) Client
     B) Storage locations
     C) Plant
     D) Company code
     E) Purchasing organisation

Answer C

6. A purchase info record is derived from which of the following master records? (select two correct answers) **[2 Marks]**

     A) Vendor
     B) Output
     C) Conditions
     D) Material
     E) Terms of payments

Answer A, D

7. Select two material master views needed in the procurement process. **[2 Marks]**

     A) Purchasing organisation
     B) Purchasing information record
     C) Basic data
     D) Purchasing data
     E) Goods receipt

Answer C, D

8. You are explaining how the procurement cycle in SAP ERP integrates with SAP Financial Accounting to a friend. Which procurement cycle business transaction in SAP ERP creates a financial accounting document? There are three (3) correct answers. **[3 Marks]**

     A. Post a goods receipt with change in material valuation
     B. Create a vendor master record
     C. Create vendor payment
     D. Enter an invoice receipt
     E. Create a purchase requisition

Answer A, C, D

9. A sales area is an important organizational unit in SAP ERP and especially in the SAP SD application. Which of the following statements are false regarding sales areas? There are three (3) correct answers. **[3 Marks]**

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C. A sales area is a combination of shipping point, distribution channel and division.
D. A sales area is assigned to exactly one company code.
E. A sales area is assigned to exactly one plant.

Answer B, C, E

10. Which of the following transactions can increase the value of inventory in a company? There are two (2) correct answers. **[2 Marks]**
   A. Purchase order
   B. Goods issue
   C. Goods receipt
   D. Post stock count
   E. Purchase requisition

Answer C, D

11. In the material master record, stocks are managed at _____ and _____ level. **[2 Marks]**

A. Company code
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C. Client
D. Storage-location
E. Purchase requisition

Answer B, D

SECTION B: Structured Questions. Marks for each question are shown at the end.
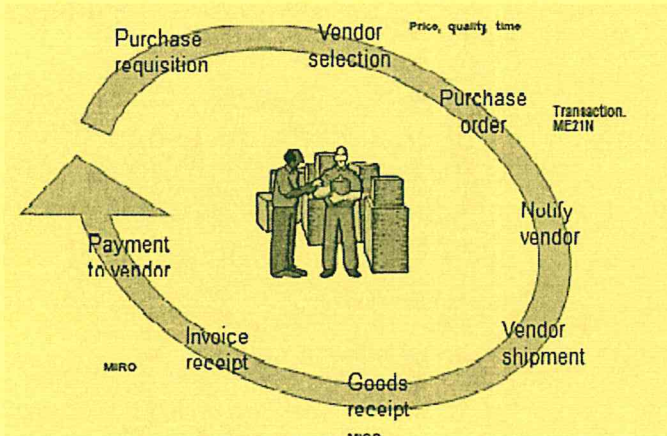
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QUESTION 1 [18 Marks]

Assume you are hired by Zambikes company to manage the procurement process. You will perform different roles within the company such as purchasing agent, warehouse employee, and an accounting specialist.

a) Illustrate the standard view of steps involved in the procure to pay process using the SAP ERP system. [4 Marks]

Answer

(0.5 mark for each correct step stated)

b) Identify the organisational structure/units required to support the procure to pay process. [3 Marks]

Answer

Client\Company code\Plant\Storage location\Purchasing organization\Purchasing group
(0.5 mark for each correct organisational structure identified)

c) You received a request from the production unit to purchase 10 Brake kit.
i) Which document will you create in an ERP system to request for the 10 Brake kit from suppliers? [1 Mark]

Answer

Purchase order

ii) Which document will you create in an ERP system to receive the 10 Brake kit from suppliers? [1 Mark]

Answer

Good receipt

iii) Explain the effects of the document you created in question c (ii). [5 Marks]

Answer

-   Material document is created.

- Accounting document is created.
- Stock quantities are updated in the material master.
- Moving average prices are updated in the material master.
- Purchase order history is updated.
- Output can be generated (GR slip / pallet label).

d) As a Purchasing Agent for Zambikes company.

i) What risks in the procurement process will you consider when receiving goods?

[2 Marks]

Answer

- Accepting items not ordered
- Mistakes in counting
- Accepting damaged goods

ii) How will you eliminate the risks you stated in question d (i)? **[2 marks]**

Answer

- Configuration of the ERP system to flag discrepancies between received and ordered quantities
- Audits

QUESTION 2 **[16 Marks]**

Analyse the scenario below and answer questions A and B.

An organisation adopted SAP R/3 system. The users in this organisation access SAP R/3 through a SAP GUI (Front-End), Application server, then the Database server.

a) Which enterprise system architecture is represented in the scenario above? **[1 Mark]**

Answer

Three-tier architecture/Client-server

b) Explain any three advantages of this enterprise system architecture. Please note that only one architecture type is represented in the scenario above. **[3 Marks]**

Answer

- It gives the development teams the ability to develop and enhance a product with greater speed
- Scalability by separating the different layers when solving problems/issues

- Increase reliability and availability by hosting different parts of your application on different servers

c) Briefly explain how ERP adopters and ERP Vendors influence new ERP functionalities.

[4 Marks]

Answer

ERP Adopters influence through the logging of development request and through representation on user groups. ERP Vendors provide ERP upgrades and new releases

d) Which four ERP data types are critical to any ERP system? [4 Marks]

Answer
- Organisational units/data
- Master data
- Business process (transactions)
- Reports

e) Briefly discuss how an ERP adopter achieve business and data integration by using an ERP system. [4 Marks]

Answer
- Business integration: Business performed in one unit is visible to and impacts real-time on other units. Sales orders are used by production and accounting to schedule production and create invoices.
- Data integration: All data is integrated in a single database object that is then looked up or defaulted. This eliminates redundant data storage and reduces data entry.
- For example, in SAP, the data from the material master is entered once and is then defaulted:

QUESTION 3 [26 Marks]

a) Use the scenario below to answer the questions that follow:

Assume a customer placed an order for products at your company. However, your company does not have the products and it would take three (3) calendar days to have the products (material availability) in stocks from the day of order placement. You are further informed that the order is due in 6 days and the customer required delivery date is on the 6th day (Day 1, Day 2........Day 6). Since all the machines are available you would like to start the production of these products immediately on Day 1.

i) On which day will the production of the new products be completed? **[1 Mark]**

Answer Day 3

ii) On which day will you dispatch the products to the customer? **[1 Mark]**

Answer Day 6

iii) Which sales order scheduling approach is followed in the scenario? **[2 Marks]**

Answer

Forward Scheduling

iv) Justify your choice of approach in iii). **[2 Marks]**

Answer

The company started the production of goods as soon as possible before the due date. Also done if no product is available on the material availability date calculated by backward scheduling.

b) The shipping process begins when you create the delivery document for the sales order. Discuss the four sub-process for shipping process. **[8 Marks]**

Answer

Picking Picking is an optional step. It involves the physical pickup of goods from their storage place and setting them aside for shipping. Hence, some of the items in the delivery document (such as services) may not be relevant for picking. The picking process can be done automatically during delivery creation or can be a scheduled activity that takes place in batches at regular intervals.

Packing Packing is the step of assembling all the picked items and packing them. It can be a multistep process, such as packing musical instruments into a special box, then packing six such boxes into a crate, and finally loading ten crates into a truck. All of these groupings are called *handling units.* Each one can be located and managed by a unique identification number.

Shipment Shipment is the step of transportation planning and execution. In this step, one or more deliveries are grouped into a shipment document. The transportation for the various legs is then planned, and as each leg is executed, the shipment document status is updated until the goods reach the customer.

Goods issue Goods issue is the last step. When you post a goods issue, the delivery has physically been shipped. The material and accounting documents get created in the background, and the user cannot change or influence any data at this stage. With this overview out of the way, we'll now cover how the process is carried out in SAP. Then we will proceed with the configuration of this process.

c) Assume you own a grocery retail and hired four employees to assist you in managing the daily activities. The business has two warehouses for storing all the products received from suppliers.

i) Why will it be important for you to manage inventory in the shop?   [4 Marks]

Answer

- Inventory is how retailers / manufacturers make profit.
- Prevent lost sales and production delays.
- Prevent cash being tied up in too much inventory or too many slow-moving items.
- Prevent inventory losses.
- Ensure financial statements are correct.

ii) On a particular day the following transactions occurred in your business. Analyse each statement below and state what type of goods movement is involved.

a) You purchased 20 products from your supplier and re-sell 15 of the products to a customer.   [4 Marks]

Answer

- **Goods receipt from Vendor**
- **Goods issue to Customer**

b) You detected that two products are damaged hence will not be usable in the business.   [2 Marks]

Answer

Stock to Stock movement

c) You transferred some products from one warehouse to the other.   [2 Marks]

Answer

Storage location to storage location (within a plant/within a company code

THE END OF EXAM