NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATICS

QUALIFICATIONS: Bachelor of Informatics	
QUALIFICATION CODE: 07BAIF	LEVEL: 6
COURSE CODE: BAP620S	COURSE: Business Analysis and Process Management
DATE: January 2024	SESSION: 1
DURATION: 3 Hours	MARKS: 100

SUPPLEMENTARY/ SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
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MODERATOR(S):	Mr Admire Kachepa

THIS EXAMINATION PAPER CONSISTS OF 4 PAGES
(INCLUDING THIS FRONT PAGE)

INSTRUCTIONS FOR THE CANDIDATE

1. Answer all questions.
2. When writing, consider the following: The style should be to inform rather than impress.
3. Information should be brief and accurate.
4. Please ensure that your writing is legible, neat and presentable.

Answer all questions in this section. Each question carries two marks.

1. **Which term refers to business processes not executed by a single group or function?**
   A. Silo effect
   B. Cross-functional
   C. Functional structure
   D. Enterprise system

2. Which term refers to a system in which workers complete their tasks in separate departments without regard to the consequences for the other process components?
   A. ERO effect
   B. Cross-functional
   C. Enterprise systems
   D. Silo effect

3. Which system supports business processes end-to-end?
   A. Management system
   B. Accounting system
   C. Enterprise system
   D. Document system

4. Which term presents a set of tasks or activities that produce desired outcomes?
   A. Business process
   B. Trigger
   C. Outcome
   D. Enterprise Resource Planning

5. Which term refers to all activities involved in buying or acquiring the materials used by the organisation, such as raw materials needed to make products?
   A. Material planning
   B. Procurement Process
   C. Production Process
   D. Fulfilment process

6. Which process involves the creation of products?
   A. Material planning
   B. Procurement process
   C. Production Process
   D. Life Cycle Data Management

7. Which process uses historical data and sales forecasts to plan which materials will be procured and produced?
   A. Material planning
   B. Procurement process
   C. Production Process
   D. Life Cycle Data Management

8. What is the final step of the procurement process?
   A. Invoice
   B. Purchase Requisition
   C. Purchase Order
   D. Payment

9. Which of the following are steps within a generic process of an organisation?
   A. Payment

B. Trigger

C. Shipment

D. Confirmation

10. Suppose that process A is a downstream process of process B. This is an example of what kind of relation?

A. An abstraction relation

B. A sequential relation

C. A hierarchical relation

D. An external relation

SECTION B [30 Marks]

1. Briefly outline the six phases of the BPB Life Cycle [30 marks]

(6 x 5 marks = 30)

SECTION C [50 marks]

Equipment rental at BuildIT.

BuildIT is a construction company specialized in public works, such as roads, bridges, pipelines, tunnels and railroads. Within BuildIT, engineers working at a construction site (called site engineers) often need equipment, such as a truck, an excavator, a bulldozer, a water pump, etc. BuildIT owns very little equipment; instead, it rents most of its equipment from specialised suppliers.

The existing business process for renting equipment goes as follows. When site engineers need to rent a piece of equipment, they fill in a form called "Equipment Rental Request" and send this request by email to one of the clerks at the company's depot. The clerk at the depot receives the request and, after consulting the catalogues of the equipment suppliers, selects the most cost-effective equipment that complies with the request. Next, the clerk checks the availability of the selected equipment with the supplier via phone or email. Sometimes the selected option is not available. In these cases, the clerk has to select an alternative piece of equipment and check its availability with the corresponding supplier.

After finding a suitable and available piece of equipment, the clerk adds the details of the selected equipment to the rental request. Each rental request must be approved by a works engineer at the depot. In some cases, the works engineer rejects the equipment rental request. Some rejections lead to the cancellation of the request, i.e., no equipment is rented at all. Other rejections are resolved by replacing the selected equipment with another equipment—such as a cheaper or more appropriate piece of equipment for the job. In this latter case, the clerk needs to lodge another availability request.

When a works engineer approves a rental request, the clerk sends a confirmation to the supplier. This confirmation includes a Purchase Order (PO) for renting the equipment. The PO is produced by BuildIT's financial information system using information entered by the clerk. The clerk also records the equipment rental in a spreadsheet that monitors all ongoing equipment rentals.

In the meantime, the site engineer may decide that the equipment is no longer needed. In this case, the engineer asks the clerk to cancel the request for renting the equipment. The supplier delivers the rented equipment to the construction site in due time. The site engineer then inspects the equipment. If everything is in order, the site engineer accepts the engagement and the equipment is put into use.

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In some cases, the equipment is sent back because it does not comply with the requirements of the site engineer. In this case, the site engineer has to start the rental process again.

When the rental period expires, the supplier comes to pick up the equipment. Sometimes, the site engineer asks for an extension of the rental period by contacting the supplier via email or phone 1 to 2 days before pick-up. The supplier may accept or reject this request.

A few days after the equipment is picked up, the supplier emails the clerk an invoice. The clerk then asks the site engineer to confirm that the equipment was rented for the period indicated in the invoice. The clerk also checks if the invoice's rental prices follow those in the PO. After these checks, the clerk forwards the invoice to the financial department. The financial department eventually pays the invoice.
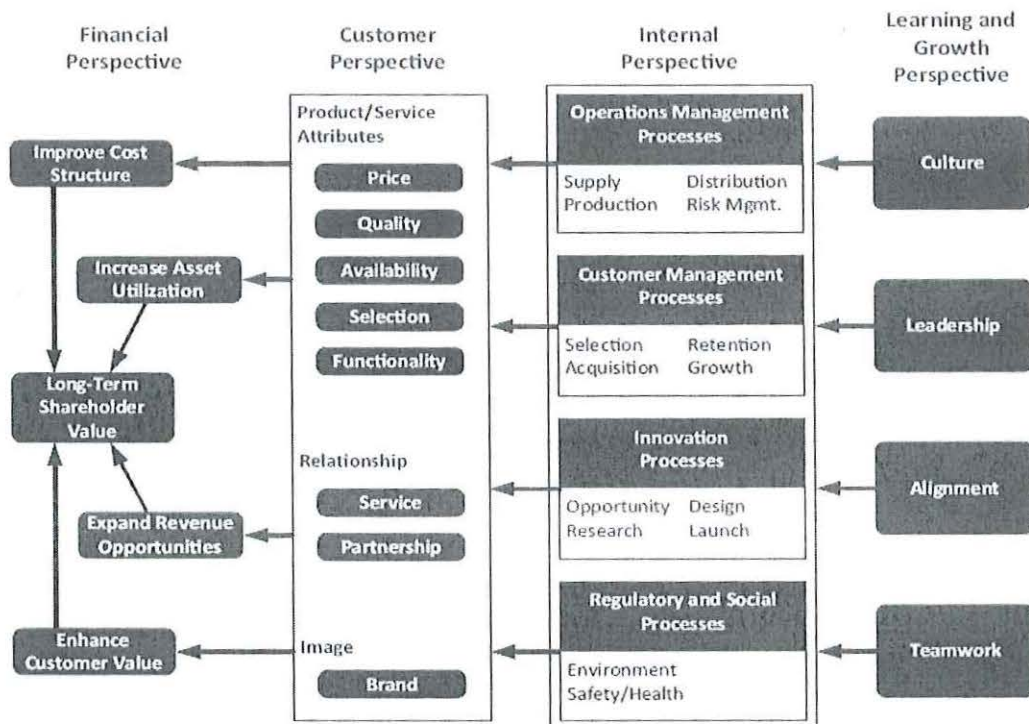

Fig. 2.1 The balanced scorecard by Kaplan & Norton

1. Consider the construction company BuildIT and its procure-to-pay process described above. [10 marks]
   a. To which category in the internal perspective of Figure 2.1 does this process belong?
   b. How does it influence different aspects of the customer perspective?
   c. How is it shaped by aspects of the learning and growth perspective?

2. Which aspects of the organisational, product, data, application, and technical infrastructure perspectives must be described to understand this process? [10 marks]

3. Construct BuildIT's process landscape model. [30 marks]

END OF PAPER