# NAMIBIA UNIVERSITY
## OF SCIENCE AND TECHNOLOGY

**FACULTY OF COMPUTING AND INFORMATICS**

**DEPARTMENT OF INFORMATICS**

| QUALIFICATION : BACHELOR OF INFORMATICS HONOURS (WEB INFORMATICS, BUSINESS INFORMATICS) | |
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| COURSE: ENTERPRISE ARCHITECTURE | COURSE CODE: EAT810S |
| QUALIFICATION CODE: 08BIFH, 08BIHB | LEVEL: 8 |
| SESSION: JUNE 2019 | PAPER: THEORY |
| DURATION: 3 HOURS | MARKS: 90 |

| FIRST OPPORTUNITY EXAMINATION QUESTION PAPER | |
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| EXAMINER(S) | Ms Irja Shaanika |
| MODERATOR | Dr Michael Twum-Darko |

| INSTRUCTIONS |
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| 1. Answer ALL the questions.<br>2. Write clearly and neatly.<br>3. Number the answers clearly. |

| PERMISSIBLE MATERIALS |
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| None. |

**THIS QUESTION PAPER CONSISTS OF 5 PAGES**
(Excluding this front page)

1. When developing Enterprise architecture to support your company operating model, which model request architects to first identify shared technologies? [1 mark]

    A. Coordination
    B. Diversification
    C. Replication
    D. Unifications

2. A_____ stores information and provides links to EA tools and other EA program resources. [1 mark]

    A. Repository
    B. Framework
    C. Methodology
    D. Artifacts

3. Which one best defines what IT infrastructure focuses on as decision domain?
    [1 mark]
    A. Choosing which initiatives to fund and how much to spend.
    B. Clarifying the business role of IT
    C. Determining shared and enabling services
    D. Defining integration and standardization requirements

4. Effective_____coordinates the interests and efforts of different business units and organizational levels (e.g., coordinate between project, LoB, and enterprise level efforts). [1 mark]

    A. IT engagement model
    B. Linking Mechanisms
    C. Project Management
    D. IT governance

5. Which leaders focus on the performance of the business units? [1 mark]

    A. Senior leaders
    B. Business leaders
    C. Project leaders
    D. Process owners
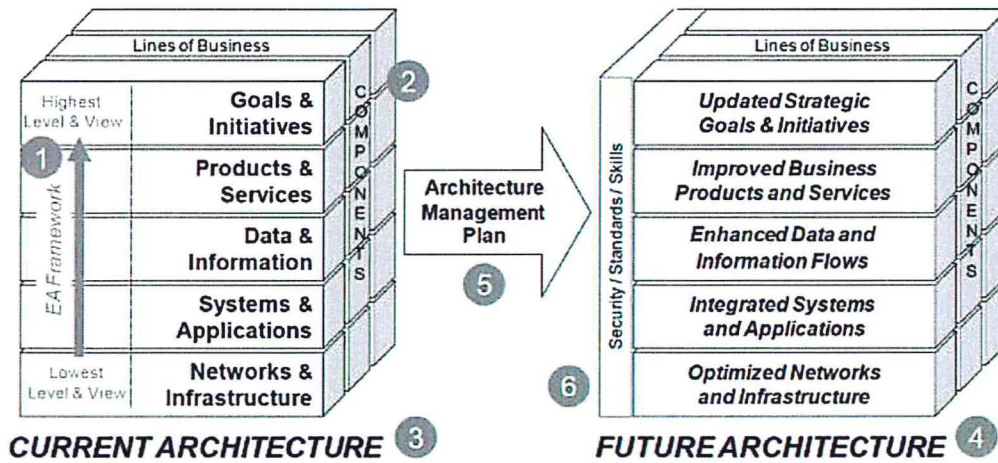
6. _____is a distinct area of activity within the enterprise.  [1 mark]

   A. Vertical component
   B. EA
   C. Architecture Segment
   D. Line of business

7. Companies operating at _____ EA maturity model provides companywide data and process standardization as appropriate for the operating model.  [1 mark]

   A. Business Modularity Architecture
   B. Optimised core architecture
   C. Business Silos architecture
   D. Standardized Technology architecture

8. Which of the following is not true about Enterprise Architecture?  [1 mark]

   A. Organizing logic for business processes and IT Infrastructure reflecting the standardization and integration of a company's operating model
   B. Is the analysis and documentation of an Enterprise in its current and future states from an integrated Strategy, Business, and Technology perspective
   C. Enterprise Architecture = Strategy + Business
   D. Is a Business issue

9. An understanding of organizational culture is important during the process of Enterprise Architecture development because it:  [1 mark]

   A. Helps in understanding the stakeholders to gain their support and manage expectations of the EA program
   B. Does not reflect the current and the future views of the organization
   C. Represent the formal system of work roles that reflect how employees and managers interact with each other
   D. It reflects authority relationships in the organization

10. Business units in a coordination company share one or more of the following except? (Select the incorrect answer).  [1 mark]

   A. Customers
   B. suppliers
   C. partners
   D. employers

**Section B: Structured Questions** [38 marks]

Question 1. As an architect in your organisation, advice management why it is important to have an Enterprise Architecture repository. [6 marks]

Question 2. Briefly discuss the six elements of Enterprise Architecture analysis and design as numbered in the figure below. [12 marks]



Question 3. Differentiate between an Enterprise Architecture component and artefact. [6 marks]

Question 4. Give examples of two components and two artefacts at the data and information level [4 marks]

Question 5. Discuss the three key disciplines organizations need to focus on when building an effective foundation for execution for Enterprise Architecture. [10 marks].

**Section C: Case Study Questions** [42 marks]

Read the following case study and answer questions below.

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**A Process for Rationalization – Dell IT Infrastructures**

In order to achieve its corporate objectives, Dell needed to rationalize its IT infrastructure. This transformative process involved consolidating multi-national systems to improve efficiency, reduce costs and enforce common standards.

The rationalization exercise helps an organization identify what standards to move towards as they eliminate the complexities and silos they have built up over the years, along with the specific technologies that will help them get there.

Depending on the company, rationalization could start with a technical discussion and be IT driven; or it could start at a business level. For example, a company might have distributed operations across the globe and desire to consolidate and standardize its business processes. That could drive change in the IT portfolio. Or a company that has gone through mergers and acquisitions might have redundant business processes to rationalize.

Rationalizing involves understanding the current state of an organization's IT portfolio and business processes, and then mapping business capabilities to IT capabilities. This is done by developing scoring criteria to analyze the current portfolio, and ultimately by deciding on the standards that will propel the organization forward. Standards are the outcome of a rationalization exercise.

In Dell's case the EA team began by establishing an enterprise vision—a blueprint to guide individual projects. This blueprint laid out the structure of the enterprise in terms of its strategy, goals, objectives, operating model, capabilities, business processes, information assets, and governance.

Using the blueprint, enterprise architects can now inventory all applications and the underlying technology currently in use, and then map the applications to business capabilities to identify omissions and redundancies. Completing an inventory and mapping exercise has revealed overlapping and duplicate applications that are now candidates for consolidation.

**Source Oracle Enterprise Architecture Case Study: Dell**

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Question 1. The Dell organisation have been operating silos over the years. List and briefly discuss some of the challenges operating in silos brings to organisations. [10 marks]

Question 2. Looking at how Dell have transformed its IT capabilities. In what EA maturity stage would you place it? Motivate your answer. [5 marks]

Question 3. Dell's transformative process involved consolidating multi-national systems to improve efficiency, reduce costs and enforce common standards. Which type of operating model is Dell supporting? Discuss five characteristics of such an operating model. [10 marks]

Question 4. As an architect, advice Dell management by discussing about the IT decisions domain required to develop the companywide IT governance. [10 marks]

Question 5. Dell organisation have selected Zachman Framework for their Enterprise Architecture modelling. What are some of the advantages and disadvantages of the Zachman framework that the organisation need to know? [7 marks]

The End