The Management University of Africa

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POST GRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF MASTER OF BUSINESS ADMINISTRATION

MBA 508: STRATEGIC MANAGEMENT INFORMATION SYSTEMS

DATE: 9TH DECEMBER 2024

DURATION: 3 HOURS

MAXIMUM MARKS: 60

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **FOUR (4)** questions.
4. Question **ONE is compulsory.**
5. Answer any other **TWO** questions.
6. Question **ONE** carries **30 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Lego: Embracing Change by Combining BI with a Flexible Information System

The Lego Group, which is headquartered in Billund, Denmark, is one of the largest toy manufacturers in the world. Lego's main products have been the bricks and figures that children have played with for generations. The Danish company has experienced sustained growth since its founding in 1932, and for most of its history its major manufacturing facilities were located in Denmark. In 2003, Lego was facing tough competition from imitators and manufacturers of electronic toys. In an effort to reduce costs, the group decided to initiate a gradual restructuring process that continues today.

In 2006, the company announced that a large part of its production would be outsourced to the electronics manufacturing service company Flextronics, which has plants in Mexico, Hungary, and the Czech Republic. The decision to outsource production came as a direct consequence of an analysis of Lego's total supply chain. To reduce labor costs, manually intensive processes were outsourced, keeping only the highly skilled workers in Billund. Lego's workforce was gradually reduced from 8,300 employees in 2003 to approximately 4,200 in 2010. Additionally, production had to be relocated to places closer to its natural markets. As a consequence of all these changes, Lego transformed itself from a manufacturing firm to a market-oriented company that is capable of reacting fast to changing global demand.

Lego's restructuring process, coupled with double- digit sales growth in the past few years, has led to the company's expansion abroad and made its workforce more international. These changes presented supply chain and human resources challenges to the company. The supply chain had to be reengineered to simplify production without reducing quality. Improved logistics planning allowed Lego to work more closely with retailers, suppliers, and the new outsourcing companies. At the same time, the human resources (HR) department needed to play a more strategic role inside the company. HR was now responsible for implementing effective policies aimed at retaining and

recruiting the most qualified employees from a diversity of cultural backgrounds. Adapting company operations to these changes required a flexible and robust IT infrastructure with business intelligence capabilities that could help management perform better forecasting and planning. As part of the solution, Lego chose to move to SAP business suite software. SAP AG, a German company that specializes in enterprise software solutions, is one of the leading software companies in the world. SAP's software products include a variety of applications designed to efficiently support all of a company's essential functions and operations. Lego chose to implement SAP's Supply Chain Management (SCM), Product Lifecycle Management (PLM), and Enterprise Resources Planning (ERP) modules.

The SCM module includes essential features such as supply chain monitoring and analysis as well as forecasting, planning, and inventory optimization. The PLM module enables managers to optimize development processes and systems. The ERP module includes, among other applications, the Human Capital Management (HCM) application for personnel administration and development. SAP's business suite is based on a flexible three-tier client-server architecture that can easily be adapted to the new Service-Oriented Architecture (SOA) available in the latest versions of the software. In the first tier, a client interface—a browser-type graphical user interface (GUI) running on either a laptop, desktop, or mobile device—submits users' requests to the application servers. The applications servers—the second tier in the system—receive and process clients' requests. In turn, these application servers send the processed requests to the database system—the third tier—which consists of one or more relational databases. SAP's business suite supports databases from different vendors, including those offered by Oracle, Microsoft, MySQL, and others. The relational databases contain the tables that store data on Lego's products, daily operations, the supply chain, and thousands of employees. Managers can easily use the SAP query tool to obtain reports from the databases, because it does not require any technical skill.

Additionally, the distributed architecture enables authorized personnel to have direct access to the database system from the company's various locations, including those in Europe, North America, and Asia. SAP's ERP-HCM module includes advanced features such as "Talent Manager" as well those for handling employee administration,

reporting, and travel and time management. These features allow Lego's HR personnel to select the best candidates, schedule their training, and create a stimulus plan to retain them. It is also possible to include performance measurements and get real-time insight into HR trends. Using these advanced features, together with tools from other software vendors, Lego's managers are able to track employees' leadership potential, develop their careers, and forecast the recruiting of new employees with certain skills.

Required:

a) Explain the role of the database in SAP's three-tier system. **(5 Marks)**

b) Discuss why distributed architectures are flexible. **(5 Marks)**

c) Describe some of the business intelligence features included in SAP's business software suite. **(5 Marks)**

d) Explain the main advantages and disadvantages of having multiple databases in a distributed architecture. **(7 Marks)**

e) Elaborate on any four principles that guide the development of a good management information system **(8 Marks)**

QUESTION TWO

a) Define the term big data. **(2 marks)**

b) Describe four trends in the global business environment that have made information systems so important **(6 Marks)**

c) Information systems exist for the organizations and not for themselves, explain the strategic role of information systems in organizations. Hint: base your answer on any Michael Porter's tool for strategic management **(7 Marks)**

QUESTION THREE

a) Discuss how from an economic point of view, information systems technology can be seen as a factor of production that can be freely substituted for capital and labor. **(6 Marks)**

b) Enterprise applications are systems that span functional areas, focus on executing business processes across the business firm, and include all levels of management. Demonstrate Four Enterprise applications **(9 Marks)**

QUESTION FOUR

a) Discuss why are information systems vulnerable to destruction, error, and abuse **(5 Marks)**

b) Describe the components of an organizational framework for security and control **(5 Marks)**

c) Examine the most important tools and technologies for safeguarding information resources **(5 Marks)**