



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF APPLIED SCIENCES
DEPARTMENT OF INFORMATICS AND ANALYTICS
TECHNOPRENEURSHIP

SIA 2108

Examination Paper
First Semester, 2024

This examination paper consists of 4 pages

Time Allowed: 3 hours
Total Marks: 100
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INSTRUCTIONS

1. This paper consists of five (5) questions.
2. Answer four (4) questions.
3. All questions carry equal marks.
4. There are Two (2) sections in this paper. Section A is **COMPULSORY** and must be answered. You may choose to answer any Two (2) of the remaining questions.

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25

- SECTION A -

QUESTION ONE

Zimbabwe is undergoing a transformative phase characterized by a focus on innovation as a key driver for economic growth and development. With a youthful population and a government committed to fostering an innovation ecosystem, various sectors, particularly education, technology, and agriculture, are witnessing significant advancements. Achieving this vision requires substantial improvements in productivity and innovation across various sectors.

- a. Identify the critical success factors innovators need to succeed. **[6]**
- b. Describe each of the phases of the innovation process. **[8]**
- c. Commercialising innovations begins with business idea evaluation. If you were asked to evaluate a new business idea, which questions would you ask to test the idea? **[5]**
- d. Part of innovation is having a strong intellectual property position as a country. Describe three intellectual property rights you are aware of and how they may be used by a technopreneur. **[6]**

QUESTION TWO

Imani is the manager of a new company that provides software solutions to customers across Zimbabwe. Recently, a trend emphasizing the benefits of an all-cloud computing infrastructure has taken the nation by storm. While keen to benefit from this trend, Imani realises that if her company expands its cloud services any more than they already do, it will have several negative consequences. The first is that overutilisation of local data centres will likely have a negative effect on their operational capacity, making it difficult to maintain service quality and potentially leading to system outages. Secondly, the local businesses that rely on these data centres for their operations will also suffer greatly as they may need to search for alternative means of hosting their applications and data. It is also worth noting that Imani has only recently been appointed to her position as manager, and she is therefore quite keen to make a good impression on her employers, particularly if she wishes to maintain her current position within the business.

- a. Which challenge is Imani likely to encounter should she decide to profit on the above trend? **[5]**

b. Specify the strategies Imani should implement to ensure her company's cloud expansion is sustainable. [6]

c. Critique the concept of corporate governance and how it relates to modern start-ups. [8]

e. As a new company, the founder(s) had to consider which legal form the venture should have. Propose key elements that need to be considered during the establishment of a:

- Sole trader
- Partnership
- Corporation.

[6]

- SECTION B -

QUESTION THREE

Ndalamo is the founder of a medical technology start-up that focuses on developing innovative healthcare solutions. Despite his dedication and the promising nature of his technology, he has faced significant challenges in securing funding. Ndalamo's start-up emerged from a vision to address critical health issues through technology. His team has developed a product that aims to improve patient outcomes in chronic disease management, but the path to commercialisation has been difficult. This is due to high barriers to entry, including regulatory requirements, extensive clinical validation processes, and significant capital needs for research and development.

a. Analyse how potential investors decide to invest in a start-up. In your analysis, mention the factors that can help or hinder an entrepreneur's chances of getting funding. [8]

b. There are several ways to view entrepreneurship according to the different entrepreneurial frameworks. Discuss one framework you are familiar with. [6]

c. Research and development rely on technology transfer for the flow of information within the entrepreneurial ecosystem. Describe the technology transfer process, showing how entrepreneurs can exploit it in furthering their technology and new venture creation. [6]

d. Define the following terms:

- Bootstrapping
- Market Segmentation
- Elevator Pitch
- Minimum Viable Product
- Incubator

[5]

QUESTION FOUR

a. Define the term disruptive technologies.

[3]

b. Analytics have a big role in e-commerce. Identify two analytics used to evaluate the performance of a company's online presence.

[4]

c. How does an on-demand services business model differ from a traditional retail business model?

[4]

d. Contrast a company's business plan from its business model.

[6]

e. Provide an example of a disruptive technology and highlight three ways it impacted an industry.

[8]

QUESTION FIVE

Bold Innovations Inc, is a newly established technology venture that aims to provide cutting-edge artificial intelligence (AI) solutions tailored for small and medium-sized enterprises (SMEs). The founders believe in giving African businesses access to these technologies for competitive advantage. In its first year, the start-up focused on developing its core products and establishing a strong online presence. To showcase the effectiveness of its solutions, it partnered with several local SMEs in various sectors, including retail and hospitality. As it continues to grow, AI Innovations remains committed to empowering businesses with innovative technologies.

a. Identify the skills aspiring entrepreneurs should focus on developing to effectively manage artificial intelligence-driven businesses.

[4]

b. Specify the potential ethical considerations entrepreneurs should keep in mind when integrating artificial intelligence into their operations. **[3]**

c. Discuss the opportunities for innovation and new product development that artificial intelligence presents for entrepreneurs in various industries. **[8]**

d. Artificial Intelligence is an innovation that has disrupted many industries. Most innovations progress along a defined path in emerging markets, commonly referred to as an diffusion S-curve curve. Explain the diffusion S-curve and its relevance to a start-up. **[10]**

END OF QUESTION PAPER