SCHOOL OF COMPUTING AND ENGINEERING SCIENCES
MASTER OF SCIENCE IN INFORMATION SYSTEMS SECURITY
MST 8301: IT ENTREPRENEURSHIP
END OF SEMESTER EXAMINATION

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DATE: 13TH April 2026 TIME: 2.30 Hours

INSTRUCTIONS:

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO

Mini Case Study

When Amina returned to Nairobi after her studies, she was excited to apply what she had learned about renewable energy. But it wasn't a lab or a corporate office that inspired her business idea — it was a dusty roadside market in Machakos County. She had stopped to buy fresh peas from a group of farmers. As they talked, she learned that nearly a third of their vegetables spoiled before reaching Nairobi markets. Without cold storage, they were forced to sell quickly at low prices. If they waited, the produce rotted. If they transported immediately, they accepted whatever price brokers offered.

That conversation stayed remained in her mind. On her drive back to Nairobi, Amina noticed something interesting: even in rural areas, farmers were paying for goods using M-Pesa, operated by Safaricom. Mobile money had reached villages where banks had not.She began thinking-"What if storage could work the same way — accessible, shared, and paid for in small amounts? "Over the next few months, she spoke to cooperatives, visited farms, and studied agricultural reports. She realized the problem wasn't production — Kenya produced enough vegetables. The problem was post-harvest loss. Drawing on her master's degree in IT, she designed a small, solar-powered cold storage unit that could operate off-grid. Farmers would pay a small daily fee via M-Pesa to store their produce safely until market prices improved. That was the birth of M-Pea Pods.
The idea did not come from a single moment of genius. It came from multiple sources working together.

Question One

(a). From the case study, identify and explain five sources of Amina's business idea. Illustrate each source with evidence from the story. (10 Marks)

(b). Using the M-Pea Pods case, identify and explain five major business risks Amina could face. Illustrate each risk with examples from the case. (10 Marks)

Question Two

Mini Case Study: Chai Fresh

When Brian graduated from a university in Kisumu, he returned home determined to start a business instead of searching for scarce formal employment. He noticed something simple but powerful. Every morning, boda boda operators, teachers, and market traders bought tea from roadside vendors. The tea was affordable but often prepared in unhygienic conditions. At the same time, supermarkets were selling branded bottled drinks but at prices many locals could not afford daily. Brian saw a gap.

He launched Chai Fresh, a small business producing hygienically prepared, ready-to-drink bottled Kenyan chai using locally sourced milk and tea leaves. The product was packaged in reusable bottles and sold slightly above street tea prices but below supermarket beverage brands. To collect payments efficiently, Brian integrated mobile payments through M-Pesa, operated by Safaricom.

To make the baseness model work, Brian started small where he produced chai from a rented kitchen, hired two youth to distribute using bicycles, partnered with kiosks near bus parks and schools and customers were made to pay via cash or M-Pesa.Within six months daily sales increased steadily, customers appreciated the hygiene and convenience and competitors began copying the bottled chai concept.

Brian now faced bigger decisions on whether to expand to supermarkets, seek a bank loan or diversify into flavored tea. He realized that passion alone was not enough. He needed a clear business model canvas and a structured business plan to scale sustainably.

(a). Identify and explain five key components Brian should include in his business plan to attract investors. **(5 Marks)**

(b). Using the Business Model Canvas framework, identify and explain five key building blocks of Chai Fresh's business model. (5 Marks)

(c).: Analyze the elements of the marketing environment that could affect Chai Fresh's growth. (5 Marks)

QUESTION THREE

Mini case: TechBridge Solutions

Kevin Mwangi, a software developer based in Nairobi, had spent five years working for different tech startups. In 2026, he decided to start his own IT firm called TechBridge Solutions. His company would provide: Custom business software for SMEs, Cloud-based data management systems and Cybersecurity services

Kevin had already secured two potential clients, but to launch properly he needed a number of things namely -Office space and equipment, Software licenses and cloud infrastructure, Marketing and branding and Salaries for two junior developers

The estimated startup cost was KES 3 million. Kevin had some savings but not enough to fully fund the business. He began exploring financing options such as a bank loan, angel investors, venture capital, SACCO loans, and government innovation funds. However, Kevin realized that choosing the right source of finance required careful consideration. At the same time, he also knew that financiers would evaluate his application before approving any funding. Kevin was also aware that he required to be creative to scale up the business.

(a) Evaluate five factors Kevin should consider when selecting a source of finance for his IT firm. (5 Marks)

(b) Explain the financier's considerations before granting Kevin the loan. (5 marks).

(c). Kevin is also aware that he requires to be creative to scale up the business. Explain five barriers that could hinder such creativity. (5 marks)

QUESTION FOUR

Mini Case: Baraka Digital Stores

Baraka Digital Stores was a small electronics and phone accessories shop located in Nakuru, Kenya. It was started in 2018 by James Mwangi, a young entrepreneur who saw an opportunity in the growing demand for smartphones and digital devices. The business initially thrived due to increased mobile money usage such as M-Pesa, which made transactions easy for customers. James leveraged social media platforms like Facebook and Instagram to market his products. He also sourced products from Nairobi suppliers and offered flexible payment options to attract university students and young professionals.

However, by 2023, the business began facing serious challenges: Large online marketplaces were offering electronics at lower prices, Customers increasingly preferred ordering directly from e-commerce platforms, Rent and operational costs increased and Digital competitors adopted automated inventory and AI-driven customer response systems, which James had not implemented.

At the same time, a supplier offered James counterfeit phone accessories at very low prices, promising higher profit margins. Some competitors were already selling similar counterfeit products without informing customers. James faced an ethical dilemma: Should he sell counterfeit goods to survive financially or Should he continue struggling in a declining physical retail market, or s close the business responsibly?

(a). Advice James on the course of action to take (5 marks) (b). In the case study above, discuss five ethical issues that James needed to put into considerations (5 marks)

(c). Identify and explain the business trends that James needed to monitor for successful business operation. (5 marks)