



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2021/2022**

COURSE NAME : TECHNOLOGY INNOVATION AND
COMMERCIALIZATION

COURSE CODE : MPA 21803

PROGRAMME CODE : MPA

EXAMINATION DATE : JANUARY / FEBRUARY 2022

DURATION : 3 HOURS

INSTRUCTION : 1. ANSWER ALL QUESTIONS
2. THIS FINAL EXAMINATION
IS AN **ONLINE** ASSESSMENT
AND CONDUCTED VIA **OPEN
BOOK**

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

Q1 Elon Musk is a serial technology entrepreneur and visionary, but he did not create PayPal or Tesla contrary to popular belief. Motors. Elon Musk is a serial technology entrepreneur and visionary, but he did not create PayPal or Tesla Motors, contrary to popular belief. He was born in South Africa and later obtained Canadian and American citizenship. He earned two bachelor's degrees, in Physics and then Economics. After graduation, he started a PhD in Physics at Stanford but dropped out after a few weeks.

At the age of 24, he co-founded Zip2, an online city guide. Four years later, he sold the company to Compaq for the US \$341 million, receiving 7% of the sale. He used \$10 million of the proceeds to start X.com, an online financial payments service, which a year later merged with Confinity, a money transfer company that included the PayPal service. However, Musk was rejected as CEO of the new company in 2000 after disagreements over the technology strategy, but he remained on the board and retained 11.7% of the shares. In 2002, PayPal was sold to eBay for US\$1.5 billion in stock, and Musk received US\$165 million.

Using US\$100 million of his windfall, in 2002, Musk founded Space Exploration Technologies or SpaceX. SpaceX designs, manufactures and launches rockets and focuses on lower costs and greater reusability than competing services. It focuses on commercial satellite contracts and cargo missions for NASA but has longer-term aspirations for space travel and colonization. It has billions of dollars worth of forwarding contracts, but it is a privately owned company and has yet to declare any profits.

Tesla Motors was founded in 2003, and Musk made investments in the company and joined the board in 2004. However, it wasn't until the company struggled in the financial crisis of 2008 that Tesla took a more significant financial and management position, owning 22% of the company and becoming CEO. The company currently offers three electric vehicles: the premium-priced Model S coupe, introduced in 2012, the Model X SUV launched in 2015, and the more affordable and mass-market Model 3 sedan, available from 2017. As a result, by 2020, Tesla achieved annual car sales of almost 200,000, but over \$1 billion yearly losses. The success of the company will depend upon the sales and profitability of the more mass-market Model 3. To develop the market and infrastructure for electric and self-driving cars, Tesla made all its patents freely available. Musk has also funded the development of the Hyperloop transportation system, which aims to provide faster-than-airline speed long-distance travel.

(Source: Tidd, J., & Bessant, J.R., 2020)

(a) Develop a Business Model Canvas (BMC), a strategic planning tool, that helped Tesla become the world's most valuable carmaker, overtaking Japan's Toyota after its stock hit a record high in 2020.

(30 marks)

(b) Outline **FIVE (5)** reasons for licensing deals that allow other automakers to use Tesla's technology.

(20 marks)

- Q2** First released in November 2006, the Zune was Microsoft's answer to the iPod. Whilst it had some nifty product features that the iPod lacked (like sharing music from player to player), the Zune, despite an expensive marketing effort by Microsoft, never really caught on.

On a design level, the Zune lacked style and the simplicity of Apple's interface. The Zune seemed clunky in comparison. Perhaps, more importantly, though, the Zune could not be used with Apple's iTunes program, and even more dominant product in its market than the iPod. By integrating the music experience, Apple created strong disincentives to any competitor that just could not be overcome.

(Source: Trott, P., 2017)

Outline **FIVE (5)** adopter categories based on the relative time of adoption of innovations.
(15 marks)

- Q3** GlaxoSmithKline (GSK) have known for many years that consumers are fickle. Many years after its immensely successful Aquafresh striped toothpaste launch, GSK undertook consumer research to explore product development opportunities. Some of the findings were surprising. Consumers questioned the need or benefit of having stripes in the paste. Yet, in-store trials, when given the opportunity to purchase a single-color paste, consumers continued to purchase the striped toothpaste. A similar reaction was recorded when consumers were asked about the flavoring of the toothpaste. Consumers suggested that they would prefer a wider variety of flavors such as strawberry or banana rather than mint, yet few consumers purchased them when other flavors were offered. The product manager emphasized the need to check consumer rhetoric with their actions.

(Source: Trott, P., 2017)

- (a) Outline **SIX (6)** risk management steps to be taken by GSK to ensure the significant risks they face have been appropriately identified, assessed, treated, monitored, and reported.
(15 marks)
- (b) Justify **FIVE (5)** reasons for new product failure with a relevant example for each one.
(20 marks)

-END OF QUESTIONS-