

Practice Exam: Innovation Frameworks II

Course: Computing 4 - Innovation

Date: 2024-07-01

Name: _____

Student ID: _____

Instructions

- Answer all questions.
- This paper is for practice only.
- Show your working where appropriate.

Section A: Multiple Choice

Choose the best answer for each question.

Q1. Which of the following best describes a disruptive innovation? **[2 marks]**

- (A) An innovation that introduces gradual improvements to existing products without changing the business model.
- (B) An innovation that involves new technology but maintains the existing business model.
- (C) An innovation that changes both the technology and business model to create new markets or meet new consumer expectations.
- (D) An innovation that only changes the business model without evolving the technology.

Q2. According to Clayton Christensen, what is a key characteristic of sustaining innovations? **[2 marks]**

- (A) They target overlooked or low-end markets ignored by incumbents.
- (B) They involve radical changes that disrupt existing markets.
- (C) They focus on improving products or services for existing customers, often moving upmarket.
- (D) They always create entirely new markets.

Q3. Which innovation model is characterized by continuous, gradual improvements without introducing new technology or business models? [2 marks]

- (A) Radical innovation
- (B) Incremental innovation
- (C) Disruptive innovation
- (D) Sustaining innovation

Q4. What differentiates radical innovation from sustaining innovation? [2 marks]

- (A) Radical innovation introduces new technology components, while sustaining innovation changes only the business model.
- (B) Radical innovation targets existing markets with incremental improvements, sustaining innovation targets new markets.
- (C) Radical innovation involves only business model changes, sustaining innovation involves technology breakthroughs.
- (D) Radical innovation creates major technological or business departures that can open new markets, while sustaining innovation improves performance for existing customers.

Q5. What is a 'low-end disruption' in Christensen's terms? [2 marks]

- (A) An innovation that targets overserved customers with higher-performance products.
- (B) An entrant offering a simpler, cheaper product that satisfies the least demanding customers at the low end of the market.
- (C) A breakthrough that immediately replaces incumbent high-end offerings.
- (D) A collaborative innovation between incumbents to block startups.

Q6. Which of the following best describes a 'new-market disruption'? [2 marks]

- (A) A change that firms use to defend established market share.
- (B) An innovation that targets nonconsumers or creates a market where none existed by enabling customers to do something they previously couldn't.
- (C) A performance improvement directed at the top-end of the market.
- (D) A minor process improvement inside an existing company.

Q7. In Christensen's framework, a firm's resources, processes, and priorities (RPP) primarily explain: [2 marks]

- (A) Why firms always succeed when they invest heavily in R&D.
- (B) How organizational capabilities and decision rules shape what innovations the firm can develop and adopt.
- (C) That technology alone determines the fate of a company.
- (D) That market timing is irrelevant to innovation outcomes.

Q8. The S-curve of technological performance is used to illustrate: [2 marks]

- (A) A linear relationship between investment and performance.
- (B) How performance improves rapidly at first for a new technology, then slows as limits are approached.
- (C) That incumbent firms always benefit from adopting the newest technology immediately.
- (D) That all innovations follow the same predictable timeline.

Q9. How does business model innovation differ from technological innovation? [2 marks]

- (A) Business model innovation focuses on new technical components, while technological innovation changes how revenue is captured.
- (B) Business model innovation changes how value is created, delivered, or captured without necessarily changing the underlying technology.
- (C) They are identical and always occur together.
- (D) Technological innovation always reduces costs, business model innovation never does.

Q10. Which strategy is commonly recommended for incumbents to defend against disruptive entrants? [2 marks]

- (A) Refuse to explore low-margin or emerging segments and focus only on existing core customers.
- (B) Integrate disruptive efforts into the same unit and processes that serve core customers.
- (C) Create separate units or spinouts with different processes and priorities to pursue disruptive opportunities.
- (D) Immediately abandon existing products to chase every new startup's idea.

Section B: Short Answer

Q11. Explain in your own words the concept of disruptive innovation and how it differs from sustaining innovation. **[6 marks]**

Q12. Describe the four innovation models (incremental, radical, sustaining, disruptive) and give an example scenario for each. **[6 marks]**

Q13. Discuss why smaller companies with fewer resources can successfully challenge established incumbents through disruptive innovation. **[6 marks]**

Section C: Long Question

Q14. Critically analyze the Innovator's Dilemma as introduced by Clayton Christensen. Discuss how disruptive innovation can cause established companies to fail despite their resources and market position. Include in your answer the roles of market targeting, resource allocation, and business model changes. **[20 marks]**