=== exam2_student2.txt ===

MSc Business Analytics – Exam 2

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Instructions:

Answer ALL questions. Use clear analytical reasoning, cite frameworks where relevant (e.g., network-effects taxonomy, AI adoption S-curve). Time allowed: 120 min.

Question 11:

Answer:

Organizations must continually adapt their structures in response to rapid change; otherwise, they risk obsolescence. When new ideas flood the market—like emerging startups or novel business models—hierarchies that resist change become bottlenecks. By adopting agile team structures and decentralized decision-making, firms can absorb external shocks and innovate faster. In short, dynamic environments demand flexible organizational designs.

Question 12:

Answer:

Social reputation management network effects occur when users derive value from others' perceived trustworthiness or status on a platform. High-reputation users attract followers, creating a virtuous cycle as more participants join to engage with credible contributors. Platforms such as Airbnb leverage host ratings to build overall trust and network participation. Therefore, social reputation becomes both an asset for individuals and a mechanism that sustains network growth.

Question 13:

Answer:

Being first does not guarantee long-term success; later entrants often iterate on early mistakes and deliver superior experiences. For instance, Google improved on AltaVista's search interfaces, and Facebook learned from Friendster's failures in social connectivity. These second movers outperformed pioneers by refining UX, monetization strategies, and network design. Consequently, the winning formula in digital platforms relies on continuous innovation rather than first-mover status.

Question 14:

Answer:

Data is inert until processed; without analytics to derive patterns, it offers no self-improvement. Successful platforms close the loop: they collect data, extract insights via machine learning, and feed those insights back into product updates. Over time, this cycle yields progressively better algorithms and user experiences. Thus, the transformation from raw data to refined knowledge is essential for sustainable learning and competitive edge.

Question 15:

Answer:

Every disruption hinges on two factors: the pace of technological progress and the rate of market adoption. Economic impact models start by estimating tech improvement (e.g., algorithmic accuracy, cost curves) and then overlay diffusion models (e.g., Bass or S-curves). By analyzing both levers, organizations can anticipate tipping points and adjust strategies accordingly. Neglecting either results in flawed forecasts and suboptimal resource allocation.

Question 16:

Answer:

Abstraction groups related concepts under a common framework, making them easier to recall and apply systematically. For example, Porter's Five Forces abstracts competitive dynamics into five categories, simplifying industry analysis. This mental scaffolding speeds up strategic thinking and avoids reinventing the wheel for each new challenge. Hence, abstraction is a foundational tool in both learning and practical analytics.

Question 17:

Answer:

Network externalities capture the inherent potential of a connected system; network effects manifest when platform artifacts transform that potential into real user benefits. For example, a messaging app's raw network externality is simply its user base, but features like group chats and encryption convert it into tangible effects. Understanding this process enables strategic design of features that maximize value per additional user.

Question 18:

Answer:

Gregory et al. showed that the power of data network effects depends on platform design—speed of data processing, predictive accuracy, stewardship, and legitimacy. Effective governance and user privacy safeguards build trust, which in turn fuels greater data sharing. As more high-quality data accumulates, AI models become more accurate, creating stronger feedback loops. Thus, technical capabilities and ethical practices jointly drive network value.

Question 19:

Answer:

Afuah's interpretation highlights that each new user doesn't just add count—they expand the range of possible interactions. In a two-sided marketplace, new sellers attract more buyers, and vice versa, multiplying the network's overall utility. Similarly, social platforms see richer content and clustering as membership grows. Therefore, the breadth and depth of network interactions directly underpin platform worth.

Question 20:

Answer:

Analyzing both collective and individual benefits ensures broad adoption and user retention. High-level network growth draws attention, but personalized rewards or group incentives secure engagement. For instance, referral bonuses target individuals while

overall user milestones demonstrate macro success. Aligning shared network gains with tailored value propositions creates a self-reinforcing growth engine.