=== exam2_student4.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:

When external forces flood the market with novel players, traditional co-ordination mechanisms buckle under pressure. To survive, organizations must shift from rigid hierarchies to fluid team networks—echoing insights from the Viable System Model. By embedding feedback loops and cross-unit autonomy, firms adapt continuously. Ultimately, structural agility becomes the linchpin for thriving amidst turbulence.

Question 12:

Answer:

Social reputation management emerges when platforms codify trust signals—ratings, endorsements—into network value. As reputation metrics accumulate, they incentivize positive behavior and community norms. In B2B marketplaces like Upwork, top-rated freelancers command higher rates, attracting more work and reinforcing their status. Thus, reputation networks produce indirect effects that amplify engagement and quality.

Question 13:

Answer:

First-mover pioneers often blaze a trail but leave weaknesses for successors to exploit. Firms like Friendster and Google+ illustrate that being first does not guarantee scaling or

profitability. Later entrants optimize UX, governance, and monetization, leveraging data network effects for deeper insights. As a result, market leadership often belongs to those who iterate fastest and best harness network data.

Question 14:

Answer:

Data must be channeled through analytics to generate learning—raw logs without ML pipelines remain idle. Platforms that embed continuous measurement, A/B testing, and model retraining convert static datasets into dynamic intelligence. This “build-measure-learn” loop, central to Lean Startup, ensures constant evolution. Without embedding insights back into the system, this cycle stalls and value creation plateaus.

Question 15:

Answer:

Assessing disruption economics requires modeling technology performance curves alongside adoption S-curves. Technology frontier improvements—driven by R&D or open-source collaboration—shift cost-benefit analyses, while adoption dynamics reflect market readiness and network effects. Combining both in scenario planning pinpoints inflection points for investment and scaling. Omitting either axis yields misleading forecasts.

Question 16:

Answer:

Abstraction lets analysts group related phenomena—such as clustering multiple KPIs into composite indices—simplifying complex datasets. By focusing on high-level constructs (e.g., risk factors), decision-makers avoid being overwhelmed by detail. In data science, feature engineering often relies on abstraction to reduce dimensionality. Therefore, abstraction underpins both cognition and practical analytics workflows.

Question 17:

Answer:

Network externalities denote the latent value embedded in connectivity—network effects describe the mechanisms by which platforms activate that potential. Data-products like recommendation engines and API ecosystems serve as catalysts, turning externalities into real usage gains. Recognizing the need for deliberate artifact design moves strategy from passive scale chasing to active network engineering.

Question 18:

Answer:

Gregory et al. dissected data network effects into technical (speed, accuracy), governance (data stewardship), and social (platform legitimation) components. Platforms that excel on these axes build stronger feedback loops and user trust. For example, GDPR-compliant data practices enhance legitimacy, encouraging richer data sharing. Consequently, network effects become as much about institutional frameworks as about algorithms.

Question 19:

Answer:

Afuah's framework emphasizes interaction feasibility: more users expand the universe of potential transactions, not just simple headcount. In two-sided platforms, additional participants increase matching probability and data granularity for personalization. For instance, gig economy apps leverage high user density to optimize pricing and routing. Thus, network value compounds non-linearly with scale.

Question 20:

Answer:

Aligning macro network metrics with micro-level incentives ensures both rapid growth and deep engagement. Broad network expansion attracts new users, but personalized dashboards, referral rewards, or group features cultivate stickiness. Multi-sided platforms that tailor value propositions maintain momentum through both scale economies and targeted benefits. This dual approach underlies long-term platform success.