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MSc Business Analytics – Exam 3

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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 21:

Answer:

Local competition dominates many sectors because customers prioritize convenience and trusted relationships. Even digital firms offer region-specific features (language, payment) to address local needs. This “glocal” approach ensures network effects translate into real engagement. Ignoring local dynamics risks building platforms that underperform in specific markets.

Question 22:

Answer:

Non-digital environments rely on manual coordination—physical stores, human labor, and face-to-face interactions—making instantaneous scale impossible. Digital transformation often targets these analog processes for automation to unlock data and efficiency gains. Recognizing which processes remain non-digital guides prioritization of digital initiatives for maximum ROI.

Question 23:

Answer:

Where human judgment drives decisions, technology acts as a cost-reducing assistant by automating routine tasks and data preparation. Marginal costs of analysis approach zero as

software scales, but final strategic calls still rest with experts. This hybrid model retains necessary human oversight while capitalizing on technological efficiencies.

Question 24:

Answer:

Network effects arise when every new user adds connectivity value—directly by enabling new interactions or indirectly by attracting complements. Direct effects are clear in communication tools; indirect effects emerge in ecosystems like app stores. Balancing investments in core and complementary products magnifies overall platform utility.

Question 25:

Answer:

Crossing into automation means machines handle workflows end-to-end, not just support human tasks. This transition reduces headcount and accelerates process cycles. In supply-chain management, initial digitization augmented planners; full automation now orchestrates procurement and logistics autonomously. Recognizing this shift informs workforce planning and capital allocation.

Question 26:

Answer:

The early web required users to obtain browsers via CDs or floppies, incurring installation hurdles and technical know-how. This barrier impeded early adoption and slowed network effects. Today's preinstalled browsers and one-click downloads eliminate such friction, demonstrating the importance of seamless onboarding in diffusion strategies.

Question 27:

Answer:

Our case example is intentionally simplified to illustrate core concepts but omits real-world complexities—regulation, legacy systems, stakeholder misalignment. Practical implementation must accommodate these additional dimensions through robust

governance and change management. Balancing simplicity and realism strengthens strategic planning.

Question 28:

Answer:

Platforms subsidize broad user access with advertising, driving scale, while enterprise or professional users pay subscription fees, funding development. This “freemium” two-tier model aligns incentives and revenues across stakeholder groups. Understanding subsidy flows is critical to building sustainable platform economics.

Question 29:

Answer:

Firms that center competition on AI model capability shift focus from classic cost or marketing battles to technical differentiation. Their competitive edge stems from proprietary algorithms, data pipelines, and compute infrastructure. In fintech, for instance, superior risk models attract capital due to lower expected losses. AI excellence thus becomes a new basis for rivalry.

Question 30:

Answer:

Referring to “bicycle” rather than enumerating wheels, frame, and gears is a form of abstraction that simplifies communication and decision-making. In analytics, we use aggregate measures (e.g., Customer Lifetime Value) to encapsulate numerous underlying metrics. Abstraction therefore serves as a bridge between complexity and actionable insight.