

TEST BANK



Information Systems Today



Why IS Matters

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Second Edition

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) Technology is said to _____ when we take a manual process (done by hand) and use computers to perform the task. 1) _____
A) informate B) automate
C) strategize D) compete
- 2) _____ is using technology as a way to help complete a task within an organization faster and, possibly, more cheaply. 2) _____
A) Automating B) Strategizing
C) Processing D) Learning
- 3) Technology is said to _____ when it provides information about its operation and the underlying work process that it supports. 3) _____
A) conglomerate B) innovate
C) dominate D) informate
- 4) A _____ organization is defined as an organization that is "skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights." 4) _____
A) technical B) profitable
C) strategizing D) learning
- 5) _____ explained that a technology informs when it provides information about its operation and the underlying work process that it supports. 5) _____
A) Shoshana Zuboff B) Michael Porter
C) Gordon Moore D) Peter Drucker
- 6) _____ is/are a formal group effort for improving the quality of organizational performance and operations. 6) _____
A) Information Management
B) Group Support Systems
C) Total Quality Management
D) Corporate Operating Systems
- 7) In a corporate setting, " _____ " involves forming a vision of where the organization needs to head, setting objectives and performance targets, and crafting a strategy to achieve the desired results. 7) _____
A) competitive advantage B) total quality management
C) best-cost provider D) strategic planning
- 8) Low cost leadership strategy, differentiation strategy, and best-cost provider strategy are examples of strategic planning for: 8) _____
A) informing. B) total quality management.
C) competitive advantage. D) organizational learning.
- 9) A company like Zellers, which offers the best prices for goods and/or services, are using a(n): 9) _____
A) organizational strategy.

- B) differentiation strategy.
C) low-cost leadership strategy.
D) best-cost provider strategy.
- 10) Companies like Porsche, Holt Renfrew, and IBM, which offer better products or services than their competitors, are using a(n): 10) _____
A) best-cost provider strategy.
B) differentiation strategy.
C) low-cost leadership strategy.
D) organizational strategy.
- 11) Companies like Wal-Mart, which offer products or services at competitive prices, are using a(n): 11) _____
A) differentiation strategy.
B) organizational strategy.
C) best-cost provider strategy.
D) low-cost leadership strategy.
- 12) Which of the following is NOT a source of competitive advantage? 12) _____
A) Achieving higher costs than rivals
B) Superior customer service
C) Having a well-known brand name
D) Achieving lower costs than rivals
- 13) Avis Rent A Car uses technology to sustain a competitive advantage in the rental car industry. What technology does Avis use to achieve this? 13) _____
A) Avis uses Global Positioning Systems in their rental cars to track customer locations.
B) Avis customer services reps use hand-held computers and printers to complete the rental transaction and generate a receipt.
C) Avis customers who use the Internet get discount rental prices.
D) Avis uses wireless technology to transmit mileage and fuel levels from returned cars.
- 14) In an organizational context, what is a value chain? 14) _____
A) Process of adding value throughout an organization.
B) Administration of a business.
C) Using technology to enhance operations.
D) Gaining a strategic advantage.
- 15) The five phases of value chain analysis include all of the following EXCEPT: 15) _____
A) outbound logistics. B) computer technology.
C) sales and marketing. D) service.
- 16) A system that uses the Internet for business-to-business interaction is called a(n): 16) _____
A) privileged network. B) extranet.
C) intranet. D) network topology.
- 17) Which of the following does not lend itself to improving the value chain? 17) _____

- A) Minimizing marketing expenditures
- B) Selling more products
- C) Improving procurement processes
- D) Increasing operating costs

18) An example of a technology innovation is the McLaren F1 Supercar valued at \$850,000. To diagnose problems with this car,; 18) _____

- A) the owner presses a self-diagnosis button on the engine.
- B) the owner plugs in a modem which connects by phone to McLaren engineers.
- C) the owner drives to a high-tech auto repair facility.
- D) the owner activates the cars internal computer, which diagnosis the problem and automatically fixes it.

19) What is a computer-aided design system? 19) _____

- A) Computer software that dictates the best competitive strategy for your company.
- B) Software that generates innovated designs and artistic patterns.
- C) The use of computers to design state-of-the-art, high-quality products.
- D) Using computers to do architecture.

20) "Making the business case" for an information system means: 20) _____

- A) choosing the best organizational strategy.
- B) choosing the best information system.
- C) conducting business process reengineering (BPR).
- D) identifying the value provided by an information system to the organization or its constituents.

21) The reason IS expenditures have risen but productivity has not risen at the same pace is hard to explain. One or more of the contributing factors have to do with: 21) _____

- A) new technology is harder to use and more complicated.
- B) management expectations of productivity gains are unrealistic.
- C) government regulation, complex tax codes, more complex products, and employee behaviour such as playing software games, web-surfing, and e-mailing friends.
- D) spending is out of control in most companies.

22) From a productivity standpoint, system efficiency is an important concept. A problem associated with system efficiency is: 22) _____

- A) it is often confused with customer relationship management.
- B) that management doesn't understand or doesn't care about system efficiency.
- C) the difficulty in measuring benefits associated with the system.
- D) that system efficiency is hampered by computer speed.

23) When employees in a business unit (e.g., Accounting or Human Resources) assist in the creation of an information system it is called: 23) _____

- A) end-user development.
- B) business unit production.
- C) outsourcing.
- D) a vendor-bender.

- 24) Information systems designed to improve decision making are called: 24) _____
A) decision support systems. B) system efficiency software.
C) strategic systems. D) groupware.
- 25) Information systems that help the organization enter a new market, gain 25) _____
or maintain market share, better serve customers, etc., are known as:
A) decision support systems. B) system efficiency software.
C) strategic systems. D) groupware.
- 26) The intent of _____ is often to help the organization enter a 26) _____
new market, gain or maintain market share, better serve customers, etc.
A) transaction processing systems
B) group support systems
C) strategic systems
D) expert systems
- 27) Problems for measuring productivity from information systems include 27) _____
the following EXCEPT:
A) effectiveness improvements are difficult to measure.
B) salary costs associated with the development of the system.
C) IS may benefit a particular firm, but not the industry as a whole.
D) a time lag may occur between system implementation and the time
when benefits are realized.
- 28) Making the _____ is the process of building and presenting 28) _____
the set of arguments that show that an information system is adding
value to the organization.
A) organizational case B) law case
C) organizational chart D) business case
- 29) An example of IS mismanagement would EXCLUDE: 29) _____
A) relying on technology to fix a problem that is really fundamental
to the business process.
B) lack of providing a detailed cost-benefit analysis.
C) implementing a system poorly.
D) building a bad system.
- 30) When making a successful business case, "Arguments based on beliefs 30) _____
about organizational strategy, competitive advantage, industry forces,
customer perceptions, market share, and so on" are known as:
A) arguments based on fear.
B) arguments based on fact.
C) arguments based on cost-benefits.
D) arguments based on faith.
- 31) What type of argument is this: "I know I don't have good data to back 31) _____
this up, but I'm convinced that having this CRM system will enable us
to serve our customers better"?
A) An argument based on faith.
B) An argument based on serendipity.
C) An argument based on fact.
D) An argument based on fear.

- 32) When making a successful business case, "Arguments based on the notion that if the system is not implemented, the firm will lose out to the competition or, worse, go out of business" are known as: 32) _____
- A) arguments based on faith.
 - B) arguments based on fear.
 - C) arguments based on dominance.
 - D) arguments based on fact.
- 33) A mature, stable industry may need IS to _____ the current pace of operations, while a company in a newer, more volatile industry (i.e., a cellular phone company) may find it more important to _____ technology. 33) _____
- A) accelerate, maintain
 - B) maintain, be on the leading edge of
 - C) advance, reduce
 - D) reduce, outsource
- 34) What type of argument is this: "This analysis shows that implementing the inventory control system will reduce errors by 50% and pay for itself within 18 months."? 34) _____
- A) An argument based on fact
 - B) An argument based on fear
 - C) An argument based on faith
 - D) An argument based on fiction.
- 35) What type of argument is this: "If we don't implement this ERP system we'll get killed by our competitors because they're using these systems."? 35) _____
- A) An argument based on pure fiction
 - B) An argument based on fact
 - C) An argument based on faith
 - D) An argument based on fear
- 36) Probably the most important factor that can affect IS investment is the nature of _____ in the industry. 36) _____
- A) customer service
 - B) competition or rivalry
 - C) marketing
 - D) technology
- 37) All of the following are competitive forces from Porter's Competitive Forces model EXCEPT: 37) _____
- A) online sellers.
 - B) potential new entrants into the market.
 - C) substitute products.
 - D) bargaining power of suppliers.
- 38) The most common way to make an argument based on fact, where convincing quantitative analysis proves the benefits outweigh the costs, is: 38) _____
- A) to look at industry trends.
 - B) conduct a cost-benefit analysis.
 - C) to demonstrate what competitors are doing.

D) hire independent consultants.

- 39) Costs that are one-time costs that are not expected to continue after the system is implemented are called: 39) _____
A) tangible costs. B) nonrecurring costs.
C) recurring costs. D) intangible costs.
- 40) Employee salaries and benefits is an example of: 40) _____
A) recurring costs. B) infrastructure costs.
C) intangible costs. D) high-risk costs.
- 41) _____ costs are ongoing costs that occur throughout the life cycle of systems development, implementation, and maintenance. 41) _____
A) High risk B) Recurring
C) Infrastructure D) Intangible
- 42) The largest recurring costs are usually: 42) _____
A) software costs. B) computer equipment costs.
C) personnel costs. D) marketing costs.
- 43) _____ costs are those that are easily identified and that are easy to recognize and track. 43) _____
A) Nonrecurring B) Tangible
C) Recurring D) Intangible
- 44) _____ costs are those that are hard to quantify, that is, they are difficult to evaluate and track. 44) _____
A) Tangible B) Intangible
C) Nonrecurring D) Recurring
- 45) Benefits such as reduction in order entry errors, increase in the customer reach of a new Web-based system, etc. are examples of: 45) _____
A) recurring costs. B) intangible benefits.
C) nonrecurring costs. D) tangible benefits.
- 46) Benefits such as improved perception of the firm and faster turnaround on order fulfillment are examples of: 46) _____
A) intangible benefits. B) tangible benefits.
C) recurring costs. D) nonrecurring costs.
- 47) The IS manager: 47) _____
A) is a nonrecurring cost.
B) is an intangible cost.
C) has overall responsibility for managing IS development, implementation, and maintenance.
D) is not in a position to make recommendations to decision makers.
- 48) When presenting the business case for a new information system, the case would not be made to: 48) _____
A) shareholders. B) the steering committee.
C) the IS manager. D) company executives.

- 49) This group (vice presidents or higher) typically represents various stakeholders or interest groups within the organization. 49) _____
 A) Company executives B) IS managers
 C) Stockholders D) The steering committee
- 50) The goal of _____ is to get an organizations leaders, who have different interests and agendas, to share the responsibilities and risks that come with aligning IS initiatives with broader business aims. 50) _____
 A) stockholders B) the steering committee
 C) company executives D) IS managers
- 51) One of the best ways to make a business case for a new system is to: 51) _____
 A) take your case to corporate stockholders.
 B) take the CEO out to lunch and talk to him/her privately.
 C) convert benefits to monetary terms.
 D) gain influence or control of the executive committee.
- 52) When direct quantification of financial benefits is difficult an alternative is the use of _____, which are measures of changes in terms of perceived value. 52) _____
 A) proxy variables B) steering committees
 C) outside consultants D) work profile matrices
- 53) If you use measures of perceived value in making a business case, you can communicate these differences in terms of percentages, increases, or decreases (whatever best conveys the benefits). These changes are demonstrated by using: 53) _____
 A) work profile matrices. B) steering committees.
 C) outside consultants. D) proxy variables.
- 54) The mindset of managers in the past was to think about information systems as a(n) _____. Managers must view IS as a(n) _____. 54) _____
 A) expense, overhead
 B) necessary evil, asset
 C) competitive advantage, liability
 D) resource, expense
- 55) A company is said to have _____ when it has gained an edge over its rivals. 55) _____
 A) monopoly B) computer advantage
 C) profitability D) competitive advantage
- 56) Sir John Maddox was quoted in 1999 as saying, "The most important discoveries of the next 50 years are likely to be ones of which we cannot now _____." 56) _____
 A) even conceive B) compute
 C) invent D) afford
- 57) The term _____ is generally used to mean the use of the Internet and related technologies that support interactive purchasing. The term _____ is used more broadly to mean the use of _____ technology. 57) _____

ogies to 57)
support
business.

- A) e-commerce, e-technology
- B) e-business, e-commerce
- C) e-technology, e-business
- D) e-commerce, e-business

58) The four consecutive stages of Choosing, Matching, Executing, and Assessing make up the: 58) _____

- A) System Development Life Cycle.
- B) Executive Information System.
- C) Functional Area Assessment System.
- D) E-Business Innovation Cycle.

59) New technologies that are anticipated to have an impact on businesses are called: 59) _____

- A) innovative growth.
- B) firmware.
- C) emerging technologies.
- D) vaporware.

60) To be successful in e-business it is important to match new technologies with: 60) _____

- A) new employees.
- B) new businesses.
- C) economic opportunities.
- D) new computers.

61) The E-Business Innovation Cycle questions the conventional wisdom that: 61) _____

- A) marketing dictates which type of technology should be used.
- B) databases can keep pace with rapid technological changes.
- C) emerging technologies are useful.
- D) economic opportunities exist.

62) Competitive advantage gained by using information systems is usually: 62) _____

- A) a slow process because technology changes slowly.
- B) permanent, because innovation tends to be ongoing.
- C) long lasting because the E-Business Innovation Cycle is cyclical.
- D) short-lived because competitors can copy emerging information systems.

63) The example of VHS video cassette recorders (VCRs) winning out the marketplace over technologically superior Betamax illustrates that: 63) _____

- A) technology is more important than marketing.
- B) emerging technology always entails risk.
- C) the best products always win the battle for consumer products.
- D) VCRs follow the E-Business Innovation Cycle.

64) The prediction that the number of transistors that could be squeezed onto a silicon chip (which correlates to microchip processing speed) doubles every 18 months is called: 64) _____

- A) competitive advantage.
- B) technological innovation.
- C) Moore's Law.
- D) a coincidence.

65) Before an organization can deploy new systems well, its people, structure, and processes must be: 65) _____

- A) capable of adapting well to change.
- B) young and innovative.
- C) more technical than its rivals.
- D) knowledge workers.

- 66) In 2005, Stantec's gross sales were \$600 million. In order to reach their goal of \$1 billion by 2010, they had to: 66) _____
- A) reduce employee numbers through increasing technology
 - B) use office automation systems
 - C) transform some older, traditional business methods
 - D) begin to sell on the web
- 67) Automating the process for loans under \$250,000 was able to reduce the time required for approval from 15 days in the fully manual form to _____ in the fully automated form. 67) _____
- A) 1 minute
 - B) 1 second
 - C) 1 week
 - D) 1 hour
- 68) A recent survey indicated that _____ percent of respondents had stolen key information from an employer. 68) _____
- A) 10
 - B) 50
 - C) 70
 - D) 17
- 69) If a system does not 'learn', the increased volume of work performed through automation can lead to: 69) _____
- A) increased volume of error.
 - B) decreased output.
 - C) manual processing.
 - D) increased input.
- 70) Which car company below takes a Focused Differentiation Strategy? 70) _____
- A) Porsche
 - B) Chevrolet
 - C) Toyota
 - D) Volkswagen
- 71) For an information system to become a source of competitive advantage, it must be _____ and _____. 71) _____
- A) economical; efficient
 - B) valuable; rare
 - C) targeted; economical
 - D) efficient; effective
- 72) While technology might be copied by competitors, it is much more difficult to copy the strategic _____ of that technology. 72) _____
- A) use
 - B) advantage
 - C) hardware
 - D) code
- 73) The Avis airport computer-supported service encounter reduced the total elapsed time for a vehicle checkin from 5-20 minutes to: 73) _____
- A) 90-110 seconds
 - B) 1-5 minutes
 - C) 5-10 minutes
 - D) 5-20 seconds
- 74) When you 'benchmark' your results with those of your competitors, you are _____ the results. 74) _____
- A) standardizing
 - B) ignoring
 - C) leveraging
 - D) comparing
- 75) What process is often required in tandem with the introduction of an enterprise information system in order to raise the likelihood of success? 75) _____

- A) workforce rightsizing
- B) business process reengineering (BPR)
- C) business practice review (BPR)
- D) infrastructure renewal initiative (IRI)

- 76) In order to be effective, an organizational information system must: 76) _____
 A) add value B) be easy to use
 C) be up-to-date D) be easy to maintain
- 77) Hagendorf (1998) estimated that technology-related spending 77) _____
 _____ between the 1980s and the 1990s, leading to the
 'productivity paradox.'
 A) doubled B) increased fivefold
 C) decreased by 100% D) dropped by half
- 78) The problem with measuring the effect/impact of a Decision Support 78) _____
 System (DSS) is that:
 A) the real cost of the DSS is hidden
 B) must compare outcome in the absence of the DSS in order to
 measure impact
 C) operators need to come 'up-to-speed' before a fair comparison can
 be made
 D) DSSs are costly
- 79) Brynjolfsson (1993) estimates that a lag of _____ years is 79) _____
 typical before strong organizational impacts of IS investments are felt.
 A) 3-4 B) 1-2 C) 2-3 D) 2-5
- 80) For a bank, ATMs are more of a(n) _____ 80) _____
 _____ than a competitive advantage.
 A) productivity paradox B) strategic initiative
 C) strategic necessity D) recurring cost
- 81) The example in the textbook regarding bank productivity assessment 81) _____
 problems after the introduction of an information system referred to
 which proxy measure and which technology initiative?
 A) cheques; kiosks B) cheques; ATMs
 C) ATMs; deposits D) loan volume; ATMs
- 82) In Canada, the number one reason firms stated for adopting Information 82) _____
 Systems in 2004 was:
 A) improve quality of service B) increased efficiency
 C) customer communication D) reduced cost
- 83) Business case arguments can be based on all of the following EXCEPT: 83) _____
 A) Fear B) phobia C) Facts D) Faith
- 84) If it is so difficult to measure the benefits of information systems, why 84) _____
 do organizations continue to invest (heavily) in them?
 A) information systems people already in the organization force their
 implementation
 B) competitive pressures make them a necessity

- C) reduced competition has made systems a necessity
- D) systems are a business process

- 85) Procter & Gamble has a wide product scope. Such businesses often implement _____ in order to integrate and streamline inventory. 85) _____
- A) enterprise marketing strategies
 - B) enterprise resource planning
 - C) enterprise database management
 - D) enterprise inventory management
- 86) An intangible benefit of a web-based system for an organization might be: 86) _____
- A) lower wages and salaries
 - B) faster turnaround time for orders
 - C) better inventory management
 - D) overall improved perception of the firm
- 87) Each of the following is one of Rubin's categories for assessing the value of IT infrastructure EXCEPT: 87) _____
- A) architectural value
 - B) operational value
 - C) intrinsic value
 - D) economic value
- 88) One of the most important yet simplest ways to show the benefit of an information system is to: 88) _____
- A) ask users what they think of it
 - B) look at your competitions assessments of the same (or similar) systems
 - C) measure what senior managers think is important
 - D) calculate productivity measures using proxy variables
- 89) In the E-Business Innovation Cycle (Wheeler 2002), the process proceeds over time in which order? 89) _____
- A) Matching, Choosing, Executing, Assessing
 - B) Executing, Choosing, Matching, Assessing
 - C) Choosing, Matching, Executing, Assessing
 - D) Choosing, Matching, Assessing, Executing
- 90) Many would argue that if you start with a strategy and retrofit technology to it, you: 90) _____
- A) will need newer technology
 - B) will need more efficient technology
 - C) will succeed
 - D) are doomed
- 91) Who said "Everything that can be invented has been invented."? 91) _____
- A) C.H. Duell, commissioner, US Office of Patents
 - B) H, M. Warner, Warner Brothers
 - C) Thomas Watson, chairman, IBM
 - D) Lord Kelvin, president, Royal Society
- 92) To deploy emerging systems well, people in the organization must be _____ willing to

to all of 92)
the
followin
g
EXCEPT:

- A) set aside political squabbles
- B) determine competitors' strategy
- C) pull together for a common goal
- D) bypass and eliminate internal bureaucracy

93) An organization with a traditional, conservative culture will most likely: 93) _____

- A) tolerate the risk of implementing emerging technology.
- B) embrace emerging technology.
- C) outsource the implementation of emerging technology.
- D) not tolerate the risk of implementing emerging technology.

94) Implementing a system to allow your customers to check the status of 94) _____

their order could easily be copied by competitors. In this case, the competitive advantage has become a:

- A) competitive necessity
- B) competitive intelligence
- C) strategic alliance
- D) strategic elimination

95) Bakos and Treacy argue that a firm will sustain competitive advantage 95) _____

from technology if they use it to:

- A) reduce barriers to entry in the industry
- B) reduce your human resource requirements
- C) make your product or service unique
- D) lower switching costs

96) Building a sophisticated and comprehensive Customer Relationship 96) _____

Management system to include the entire history of your interactions with your customers could have the effect of:

- A) raising barriers to exit the industry.
- B) creating a competitive environment in your industry.
- C) lowering switching costs for your customers.
- D) raising switching costs for your customers.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

97) A "learning organization" is defined as an organization that provides 97) _____
educational benefits to its employees.

98) Shoshana Zuboff (1988) explained that a technology informs when it 98) _____
provides information about its operation and the underlying work process that it supports.

99) A combined automating and learning approach, in the long run, is more 99) _____
effective than an automating approach alone.

100) Total quality management is a formal group effort for improving the 100) _____
quality of organizational performance and operations.

101) Low cost leadership strategy, differentiation strategy, and best-cost provider

strategy 101)
are
examples
of
organizational
learning.

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- 102) Companies like Zellers, which offer the best prices for goods and/or services, are examples of the low-cost leadership strategy. 102) ____
- 103) Companies like Porsche, Holt Renfrew, and IBM, which offer better products or services than their competitors, are examples of the best-cost provider strategy. 103) ____
- 104) An ATM network is unlikely to become a source of competitive advantage for a Canadian bank. 104) ____
- 105) Michael Porter developed the value chain analysis model. 105) ____
- 106) A system that uses the Internet for business-to-business interaction is called an Intranet. 106) ____
- 107) A computer-aided design system uses computers to design state-of-the-art, high-quality products. 107) ____
- 108) "Productivity paradox" is when IS expenditures have risen but productivity has not increased at the same rate. 108) ____
- 109) When employees in a business unit (e.g., Accounting or Human Resources) assist in the creation of an information system it is called business unit production. 109) ____
- 110) Information systems designed to improve decision making are called decision support systems. 110) ____
- 111) Making the business case is the process of building and presenting the set of arguments that show that an information system is adding value to the organization. 111) ____
- 112) When making a successful business case, "Arguments based on the notion that if the system is not implemented, the firm will lose out to the competition or, worse, go out of business" are known as an argument based on fact. 112) ____
- 113) When making a successful business case, "Arguments based on data, quantitative analysis, and/or indisputable factors" is known as an argument based on faith. 113) ____
- 114) Probably the most important factor that can affect IS investment is the nature of competition or rivalry in the industry. 114) ____

- 115) Moore's Law deals with five primary competitive forces. 115) ____
- 116) A cost-benefit analysis is one way to present a business case based on fact. 116) ____
- 117) Tangible costs are one-time costs that are not expected to continue after the system is implemented. 117) ____
- 118) Employee salaries and benefits are examples of intangible costs. 118) ____
- 119) The largest recurring costs are usually computer equipment costs. 119) ____
- 120) Tangible costs are those that are hard to quantify, that is, they are difficult to evaluate and track. 120) ____
- 121) Benefits such as improved perception of the firm and faster turnaround on order fulfillment are examples of intangible benefits. 121) ____
- 122) The IS manager has overall responsibility for managing IS development, implementation, and maintenance. 122) ____
- 123) One might present a business case to any of these: the IS manager, company executives, or a steering committee. 123) ____
- 124) Work profile matrices measure changes in terms of perceived value. 124) ____
- 125) A company is said to have a monopoly when it has gained an edge over its rivals. 125) ____
- 126) The term e-commerce is generally used to mean the use of the Internet and related technologies that support interactive purchasing. 126) ____
- 127) The four consecutive stages of Choosing, Matching, Executing, and Assessing make up the System Development Life Cycle. 127) ____
- 128) New technologies that are anticipated to have an impact on businesses are called firmware. 128) ____
- 129) To be successful in e-business it is important to match new technologies with economic opportunities. 129) ____
- 130) Competitive advantage gained by using information systems is usually short-lived because competitors can copy emerging information systems. 130) ____
- 131) The prediction that the number of transistors that could be squeezed onto a silicon chip (which correlates to microchip processing speed) doubles every 18 months is called Moore's Law. 131) ____
- 132) Without 'learning' it is more difficult to uncover bad business processes underlying the information system. 132) ____

- 133) A recent survey found that 7% of employees had stolen key information from an employer. 133) _____
- 134) An organization displays competitive necessity whenever it has an edge over rivals in attracting customers and defending against competitive forces. 134) _____
- 135) For an information system to become the source of competitive advantage it must be valuable and rare. 135) _____
- 136) The Avis airport computer-supported checkin system reduced the elapsed time for the transaction from 5-20 minutes to 1-5 minutes. 136) _____
- 137) Benchmarking refers to comparing the cost of your system with that of your competitor's system. 137) _____
- 138) A system that is not adding value to an organization should be maintained. 138) _____
- 139) It is estimated (Hagendorf, 1998) that technology-related spending increased twofold between the 1980s and the 1990s. 139) _____
- 140) One of the difficulties with measuring the value added by a DSS is that it is difficult to compare the outcome of the decision with and without the DSS since, by definition, the latter never occurred. 140) _____
- 141) Often productivity gains can be masked owing to using the same proxy measure before and after technology introduction. 141) _____
- 142) ATMs have become a strategic necessity in the baking industry. 142) _____
- 143) In a 2004 survey, the number one reason cited by Canadian businesses for introducing technology was to reduce costs. 143) _____
- 144) Rubin (CIO, June 2004) suggested four categories for assessing the value of the IT infrastructure. These are: economic value; architectural value; operational value and regulatory and compliance value. 144) _____
- 145) Implementing a system is easy. What is difficult is using the system to create and sustain competitive advantage. 145) _____
- 146) If the necessary skills for deployment of an IS are not available within the organization, the system is doomed to failure. 146) _____
- 147) One of the prerequisites for introducing an IS that allows customers to see internal information is that such information must be shared inside the organization first. 147) _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 148) Technology is said to _____ when we take a manual process (done by hand) and use computers to perform the task. 148) _____

- 149) Technology is said to _____ when it provides information about its operation and the underlying work process that it supports. 149) _____
- 150) In a corporate setting, " _____ planning" involves forming a vision of where the organization needs to head, setting objectives and performance targets, and crafting a strategy to achieve the desired results. 150) _____
- 151) Companies like Porsche, Holt Renfrew, and IBM, which offer better products or services than their competitors, are examples of the _____ strategy. 151) _____
- 152) The process of adding value throughout an organization is called a _____ chain. 152) _____
- 153) A system that uses the Internet for business-to-business interaction is called a(n) _____. 153) _____
- 154) The use of computers to design state-of-the-art, high-quality products is called a _____ system. 154) _____
- 155) "Making the _____ case" for an information system means identifying the value provided by an information system to the organization or its constituents. 155) _____
- 156) The "productivity _____" is the realization that while IS expenditures have risen, productivity has not increased at the same rate. 156) _____
- 157) When employees in a business unit (e.g., Accounting or Human Resources) assist in the creation of an information system it is called _____ development. 157) _____
- 158) Information systems designed to improve decision making are called _____ systems. 158) _____
- 159) Information systems that help the organization enter a new market, gain or maintain market share, better serve customers, etc., are known as _____ systems. 159) _____
- 160) Making the _____ case is the process of building and presenting the set of arguments that show that an information system is adding value to the organization. 160) _____
- 161) In cases in which it is not easy to quantify the impact of an investment, you can come up with _____ to help clarify what the impact on the firm will be. 161) _____
- 162) _____ business refers to the use of information technologies and systems to support the business. 162) _____

- 163) Rivals can copy emerging information systems, so this form of competitive advantage can be _____.
- 164) Intel founder Gordon Moore predicted that the number of transistors that could be squeezed onto a silicon chip would double every _____ months.
- 165) Information loaded into Stantec's SMKC system immediately becomes available to employees through the company _____.
- 166) In 1993, David Garvin described a _____ as one that is "skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights."
- 167) Without learning, it is difficult to uncover bad _____ underlying the information system.
- 168) A recent survey found that _____ percent of employees had stolen key information from an employer.
- 169) An organization has _____ whenever it has an edge over rivals in attracting customers and defending against competitive forces.
- 170) Holt Renfrew pursues a _____ strategy.
- 171) Even if a technology is both valuable and rare, it must resist _____ and _____ if it is to sustain a competitive advantage.
- 172) While it is relatively easy to copy the implementation of technology, it is much for difficult to duplicate the _____ use of that technology.
- 173) Simply dropping a system into an organization will not guarantee success, even with the best of technology. Often what is required is a commensurate analysis of and improvement in the way business is done. This process is referred to as a _____.
- 174) Brynjolfsson (1993) reports that lags of 2-3 years are typical before strong organizational impacts of IS _____ are felt.
- 175) In Canada, the UK, Australia and Japan, the number one reason for adopting information systems cited by business in 2004 was _____.

- 176) Three types of arguments commonly made in the business case for an information system are those based on _____, _____ and _____. 176) _____
- 177) If an argument were made in a business case that the firm needs a particular information system because "...all of our competitors have it!", this is an argument based on _____. 177) _____

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 178) Explain the value added from automating, informing and strategizing with information systems.
- 179) Discuss various options for organizational strategy. What options are there for strategic planning that might give a company competitive advantage?
- 180) Describe how Avis Rent A Car used technology in an effort to gain competitive advantage over its rivals.
- 181) Discuss the potential role of IS in value chain analysis.
- 182) The "productivity paradox" is the phenomenon in which productivity doesn't seem to rise proportionally to IS expenditures. What are some of the factors that make a company's productivity difficult to measure?
- 183) Arguments for an information system can be based on faith, fear, or fact. Describe all three.
- 184) Discuss some strategies for effectively making a business case to some high-level leaders in an organization.
- 185) Describe the E-Business Innovation Cycle.
- 186) What are some of the requirements for a business to be at the cutting edge of technology?
- 187) A Decision Support System (DSS) is designed to improve decision making. Why is measuring the impact of introducing the system difficult?
- 188) Appelgate and McFarlan outline five impacts of IS on competitive forces. List the five impacts, their corresponding implications for the firm, and at least one potential use of IS to combat the competitive force.
- 189) Rubin (CIO, June 2004) has suggested four categories for assessing the value of IT infrastructure. List and describe each. Use examples as appropriate.

- 1) B
- 2) A
- 3) D
- 4) D
- 5) A
- 6) C
- 7) D
- 8) C
- 9) C
- 10) B
- 11) C
- 12) A
- 13) B
- 14) A
- 15) B
- 16) B
- 17) D
- 18) B
- 19) C
- 20) D
- 21) C
- 22) C
- 23) A
- 24) A
- 25) C
- 26) C
- 27) B
- 28) D
- 29) B
- 30) D
- 31) A
- 32) B
- 33) B
- 34) A
- 35) D
- 36) B
- 37) A
- 38) B
- 39) B
- 40) A
- 41) B
- 42) C
- 43) B
- 44) B
- 45) D
- 46) A
- 47) C
- 48) A
- 49) A
- 50) C
- 51) C

- 52) A
- 53) D
- 54) B
- 55) D
- 56) A
- 57) D
- 58) D
- 59) C
- 60) C
- 61) A
- 62) D
- 63) B
- 64) C
- 65) A
- 66) C
- 67) B
- 68) C
- 69) A
- 70) A
- 71) B
- 72) A
- 73) D
- 74) D
- 75) B
- 76) A
- 77) B
- 78) B
- 79) C
- 80) C
- 81) B
- 82) B
- 83) B
- 84) B
- 85) B
- 86) D
- 87) C
- 88) C
- 89) C
- 90) D
- 91) A
- 92) B
- 93) D
- 94) A
- 95) C
- 96) D
- 97) FALSE
- 98) TRUE
- 99) TRUE
- 100) TRUE
- 101) FALSE
- 102) TRUE
- 103) FALSE

- 104) TRUE
- 105) TRUE
- 106) FALSE
- 107) TRUE
- 108) TRUE
- 109) FALSE
- 110) TRUE
- 111) TRUE
- 112) FALSE
- 113) FALSE
- 114) TRUE
- 115) FALSE
- 116) TRUE
- 117) FALSE
- 118) FALSE
- 119) FALSE
- 120) FALSE
- 121) TRUE
- 122) TRUE
- 123) TRUE
- 124) FALSE
- 125) FALSE
- 126) TRUE
- 127) FALSE
- 128) FALSE
- 129) TRUE
- 130) TRUE
- 131) TRUE
- 132) TRUE
- 133) FALSE
- 134) FALSE
- 135) TRUE
- 136) FALSE
- 137) FALSE
- 138) FALSE
- 139) FALSE
- 140) TRUE
- 141) TRUE
- 142) TRUE
- 143) FALSE
- 144) TRUE
- 145) TRUE
- 146) FALSE
- 147) FALSE
- 148) automate
- 149) informate
- 150) strategic
- 151) differentiation
- 152) value
- 153) Extranet
- 154) computer aided design (CAD)
- 155) business

- 156) paradox
- 157) end-user
- 158) decision support
- 159) strategic
- 160) business
- 161) proxy variables
- 162) Electronic
- 163) short-lived
- 164) eighteen
- 165) intranet
- 166) learning organization
- 167) business processes
- 168) seventy (70)
- 169) competitive advantage
- 170) focussed differentiation
- 171) imitation, substitution
- 172) strategic
- 173) business process reengineering
- 174) investments
- 175) increased efficiency
- 176) fact, faith and fear
- 177) fear
- 178) Automating involves the use of technology to complete a task within an organization faster, better, cheaper, and with greater consistency. Informating goes beyond automating because it involves learning to improve the day-to-day activities within a process. A learning organization is one that is skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights. Strategizing is associated with strategic planning, the process of forming a vision of where the organization needs to head, converting the system into measurable objectives and performance targets, and crafting a strategy to achieve the desired results.
- 179) Several options exist for organizational strategy. An organization might pursue a low-cost leadership strategy, like Dell Computers or Zellers, in which it offers the best prices in its industry on goods and services. Another option would be a differentiation strategy where an organization creates better products or services than its competitors. Companies like Holt Renfrew and IBM do this. Or, a middle-of-the road strategy called the best-cost provider might be an option, where products or services of reasonably good quality are offered at competitive prices. The Bay is an example of a best-cost provider. Other strategies include having the best-made product, having superior customer service, having lower costs, shorter lead times, and well-known name brands.
- 180) Avis equipped customer service representatives with hand-held computers and printers strapped to their waists or over their shoulders. As customers would return their rental cars the customer service representatives would input the car license number, mileage, and fuel level. By the time the customer has gotten out of the car and retrieved their luggage, their paperwork and receipt has already been printed. The paperwork is completed right away. The advantage for the customer is a lot of time saved. The advantage for Avis is happier customers, more efficient service, and ultimately more business.
- 181) There are five aspects to the value chain in an organization. These are (1) purchased supplies or inbound logistics, (2) operations, (3) outbound logistics, (4) sales and marketing, and (5) service. Foundational to these five operations are general administration, human resource management, and product R & D, technology, and systems development. IS can enhance the value chain. For example, inbound logistics can be supported by Internet links to suppliers, operations can be enhanced by computer-aided

man ms, and outbound logistics can be facilitated by Internet links to dealers. An online product ufact catalog and ordering would enhance sales and marketing. Service would be enhanced by a urin customer service response system. A variety of project management software and financial g decision support software would bolster the foundational aspects of the value chain. syste

- 182) Factors that mask, hide, or reduce productivity in an organization include government regulations, complex tax codes, and more complex products. Employees might reduce productivity by spending excessive amounts of time surfing the Web to check sports or other types of Web sites. Other employees might download and play software games. Junk mail slows productivity. Lastly, benefits might not be measurable or detectable. How does one quantify the benefits of, say, e-mail for example? How does one measure the return on investment of project management software? Further complicating the quantification issue is that expected benefits are not always defined in advance.
- 183) Arguments based on faith are arguments based on beliefs about organizational strategy, competitive advantage, industry forces, customer perceptions, market share, and so on. An example of an argument by faith would be, "I have a gut feeling that Customer Relationship Management will solve our sales and services problems and enable us to serve our customers better than the competition." Arguments based on fear focus on the negative consequences of *not* taking action with regard to implementing a system. Perhaps the fear centres on lost market share or going out of business. An example of an argument based on fear is, "If we don't acquire Project Management software our competitors will be able to outpace us in the industry." Lastly, arguments based on facts involve the use of data, quantitative analysis, or other indisputable factors. An argument based on fact might be, "This cost/benefit analysis shows that an Enterprise Resource Planning system will save us 25% in reduced operating costs over each of the next three years."
- 184) First, it is important to know the audience. Whether the audience is an IS manager, company executives (vice presidents or higher), or a steering committee, the key thing is to know the audience and their strategic direction for the company. It is imperative that the desired IS system fit well with the defined goals of the company. Whenever possible, convert the corporate benefits generated by the proposed system into monetary terms. Corporate leaders understand money. They want to know the impact or advantage to the bottom line, that is profitability. Proxy variables that measure changes in perceived value to the company are a good alternative if quantification of financial benefits isn't possible. Another alternative would be to use a work profile matrix to calculate the amount of money or percent of change by work categories within departments. The most important thing to remember in all these benefit assessment methodologies is to measure what is important to management.
- 185) The E-Business Innovation Cycle is comprised of four phases. First is **choosing** enabling or emerging technologies that will enhance the company. Doing so will convey new IT insights into the business. Second, one must **match** the technology to economic opportunities. The combination of emerging technology matched to economic opportunity sets the stage for e-business initiatives. Third, one must **execute** business innovation for growth. Then, the innovations or value propositions must be implemented in the marketplace. Fourth and last, **assessment** of external customer and internal client value must be evaluated. The organizational learning that takes place from assessment must be applied to each of the first three phases (choosing, matching, and executing).
- 186) Being competitive means doing things faster, better, and cheaper than the other guy. Porter's five competitive forces should always be in mind: threats from traditional rivals, new entrants into the market, customer bargaining power, supplier bargaining power, and potential substitute products are all risk factors. The bottom line is to know where the threat is coming from and adapt technology to the high-risk area(s). Still, before an organization can deploy new systems well, its people, structure, and processes must be

capable of adapting well to change. And, given a willingness to change, the personnel in your organization must have enough resources, time, knowledge, and skills to adapt. The people must have the appropriate tolerance for risk, uncertainty, and unexpected problems that might arise.

- 187) One needs to measure the differences in outcome between decisions made WITH and WITHOUT the DSS in place. This kind of comparison is difficult to make in a business setting. Furthermore, it is not clear what constitutes 'adding value' in this context. Does adding value mean making decisions that result in better outcomes, improving the decision-making process, having the capability of making more decisions, being able to justify a decision more effectively, making people feel better about the decision outcomes or the decision-making process, or some combination of these and other factors? Until it becomes clear, the making a decision about the value of a DSS will remain difficult.
- 188) 1) Traditional rivals within your industry lead to competition in price, product, distribution and service. Firms can implement an ERP to reduce costs and improve action and reaction time, and/or implement a website to offer better service to customers.
2) Threat of new entrants into your market leads to increased capacity in the industry, reduced prices and/or decreased market share. Firms can implement or improve their website to reach customers and differentiate products; implement inventory control systems to lower costs and better manage excess capacity.
3) Customer bargaining power leads to reduced prices, increased quality and/or demand for more services. Firms can implement a CRM system to serve customers better, implement computer-aided design and/or computer-aided manufacturing to improve product quality.
4) Supplier bargaining power leads to higher prices and reduced quality. Firms can use internet to establish closer electronic ties with suppliers and to create relationships with new suppliers located far away.
5) Threat of substitute products from other industries leads to potential returns on products, decreased market share and/or losing customers for life. Firms can use DSS and customer purchase database to better assess trends and customer needs, and/or use computer-aided design systems to refine products.
- 189) 1) Economic value: the contribution of the infrastructure to the business. Use important business metrics to gauge the value. An airline might use revenue per passenger mile.
2) Architectural value: the capacity of the infrastructure to meet business needs today and in the future. It depends on characteristics such as interoperability, portability, scalability, recoverability and compatibility. Each business unit should provide their own measurements on each dimension.
3) Operational value: An assessment of the actual performance of the infrastructure in meeting business process requirements. Measuring the cost to the business resulting from an outage is a good indicator of loss to revenue, staff productivity or customer base.
4) Regulatory and Compliance value: The extent to which the infrastructure helps to meet requirements for control, security and integrity as required by a governing body or a key customer.
- Ruban argues that each should be compared with external benchmarks where possible.