

Chapter 15

Managing Global Systems

True-False Questions

- The growth of international trade has radically altered domestic economies around the globe.

Answer: True **Difficulty: Easy** **Reference: p. 596**
- Before you develop a corporate strategy and structure for globalization, a firm should determine the appropriate technology infrastructure.

Answer: False **Difficulty: Easy** **Reference: pp. 597–598**
- Global business drivers can be divided into two groups: general cultural factors and specific business factors.

Answer: True **Difficulty: Medium** **Reference: p. 598**
- The collapse of the Eastern block has speeded the growth of a world culture.

Answer: True **Difficulty: Easy** **Reference: p. 598**
- The growth of powerful communications technologies and the emergence of world cultures create the condition for global markets.

Answer: True **Difficulty: Easy** **Reference: p. 599**
- Micromarketing is limited to marketing to very small geographic and social units within a domestic market.

Answer: False **Difficulty: Medium** **Reference: p. 599**
- A powerful strategic advantage for a globalized firm is lowered cost factors in production.

Answer: True **Difficulty: Easy** **Reference: p. 599**
- Particularism is a concept based on accepting the concept of a shared global culture and the penetration of domestic markets by foreign goods and services.

Answer: False **Difficulty: Hard** **Reference: p. 600**
- At the cultural level, differences among cultures produce differences in social expectations, politics, and legal rules.

Answer: True **Difficulty: Easy** **Reference: p. 600**

10. Globalization means that companies can be less concerned with the laws governing the movement of information.
- Answer: False** **Difficulty: Easy** **Reference: p. 600**
11. European countries have very strict laws concerning transborder data flows and privacy.
- Answer: True** **Difficulty: Easy** **Reference: p. 600**
12. The European Union Data Protection Directive restricts the flow of any information to countries that do not meet strict European laws on personal information.
- Answer: True** **Difficulty: Medium** **Reference: p. 600**
13. To avoid the cost and uncertainty of moving information across national boundaries, most multinational firms have developed information systems within each European country.
- Answer: True** **Difficulty: Medium** **Reference: p. 600**
14. With the growth of the Internet and reliable phone networks, skilled consultants are readily available to companies operating in global markets.
- Answer: False** **Difficulty: Easy** **Reference: p. 600**
15. The accounting practices of a country are tightly intertwined with that country's legal system.
- Answer: True** **Difficulty: Easy** **Reference: p. 600**
16. In international companies, English has become a kind of standard business language.
- Answer: True** **Difficulty: Easy** **Reference: p. 601**
17. In a multinational strategy, products and services on sale in different countries are adapted to serve local market conditions.
- Answer: True** **Difficulty: Medium** **Reference: p. 602**
18. Global systems allow fixed costs to be amortized over a much smaller customer base.
- Answer: False** **Difficulty: Medium** **Reference: p. 610**
19. The major telecommunications challenge in an international setting is making data flow seamlessly across networks shaped by disparate national standards.
- Answer: True** **Difficulty: Easy** **Reference: p. 612**
20. Private networks may not provide the same level of quick and predictable response as VPNs.
- Answer: False** **Difficulty: Hard** **Reference: p. 613**

Multiple-Choice Questions

21. Based on your reading of the chapter case discussing DHL, what led DHL to reconsider using a decentralized database system for local data?
- Decentralization raised costs
 - Risks of local information centers would fail and jeopardize shipments in other countries
 - Difficult to quickly change systems globally
 - All of the above

Answer: d

Difficulty: Easy

Reference: pp. 593–594

22. Today, the combined annual value of imports and exports from all nations is approximately:
- \$67 billion.
 - \$27 billion.
 - \$20 trillion.
 - \$67 trillion.

Answer: c

Difficulty: Easy

Reference: p. 596

23. A force in the environment to which businesses must respond and that influences the direction of the business is called a business:
- driver.
 - threat.
 - process.
 - matrix.

Answer: a

Difficulty: Easy

Reference: p. 597

24. The major dimensions of international systems architecture include each of the following EXCEPT:
- the global environment.
 - corporate global strategy.
 - technology platform.
 - transborder data flows.

Answer: d

Difficulty: Easy

Reference: p. 597

25. General cultural factors driving global business are:

- a. global communication and transportation technologies, a global knowledge base, and global social norms.
- b. the development of global markets, political stability, and a global workforce.
- c. the rise of the global workforce, political stability, and a global knowledge base.
- d. the rise of a global workforce, global economies of scale, and global production and operations.

Answer: a

Difficulty: Medium

Reference: p. 598

26. Global coordination of all of the major business functions permits the location of business activity according to:

- a. social norms and values.
- b. comparative advantage.
- c. competitive threat.
- d. knowledge base.

Answer: b

Difficulty: Easy

Reference: p. 599

27. Marketing to very small geographic and social units is called:

- a. targeted marketing.
- b. macromarketing.
- c. mom-and-pop marketing.
- d. micromarketing.

Answer: d

Difficulty: Easy

Reference: p. 599

28. Making judgments and taking action on the basis of narrow or personal characteristics is referred to as:

- a. micromarketing.
- b. macromarketing.
- c. particularism.
- d. prejudicial.

Answer: c

Difficulty: Easy

Reference: p. 600

29. Which of the following restricts the flow of personal information to countries that do not meet strict European information laws on personal information?

- a. Free Trade Agreement
- b. European Union Data Protection Directive
- c. United Nations Privacy Act
- d. European Transborder Data Flow Act

Answer: b

Difficulty: Easy

Reference: p. 600

30. General challenges and obstacles to global business systems are typified by:
- different technology standards, shortages of skilled consultants, and social expectations.
 - brand-name expectations, language differences, and commercial regulations.
 - different work hours, transborder data and privacy laws, and different technology standards.
 - different communications standards, language differences, and network reliability.

Answer: b **Difficulty: Hard** **Reference: p. 600**

31. To avoid the cost and uncertainty of moving information across national boundaries, most multinational firms:
- maintain a master database at their head offices.
 - develop a master system that meets the standards of all the countries concerned.
 - use microwave satellite transmission to move data.
 - develop separate systems within each country.

Answer: d **Difficulty: Medium** **Reference: p. 600**

32. German companies generally:
- do not recognize the profit until the project is completely finished and they have been paid.
 - recognize profits before the project is finished.
 - recognize profits when the project is initialized.
 - do not recognize the profits until they have been formally audited.

Answer: a **Difficulty: Hard** **Reference: p. 600**

33. Most large companies with overseas operations have inherited:
- recently built technology platforms for international systems.
 - batch-oriented reporting from independent foreign divisions to corporate headquarters.
 - transaction-oriented reporting based at the home office for overseas business.
 - global marketing systems developed domestically.

Answer: b **Difficulty: Hard** **Reference: p. 601**

34. In terms of global business strategy and structure, a domestic exporter will use a policy of:
- some dispersed sales, with centralized production, accounting, human resources, and strategic management.
 - centralized production and accounting with decentralized marketing and human resources.
 - centralized production, accounting, marketing, and human resources.
 - dispersed production and marketing, with centralized accounting, human resources and strategic management.

Answer: a **Difficulty: Medium** **Reference: p. 602**

35. In terms of global business strategy, Caterpillar Corporation and other heavy capital equipment manufacturers fall into this category of firm.
- a. Domestic exporter
 - b. Multinational
 - c. Franchiser
 - d. Transnational

Answer: a **Difficulty: Medium** **Reference: p. 602**

36. A company that controls finances in the home country and decentralizes production, sales, and marketing operations to other countries is using a _____ strategy.
- a. domestic exporter
 - b. franchising
 - c. transnational
 - d. multinational

Answer: d **Difficulty: Easy** **Reference: p. 602**

37. In terms of global business strategy and structure, a multinational company will use a policy of:
- a. mixed sales and marketing, with centralized production, accounting, human resources, and strategic management.
 - b. centralized production, accounting, marketing, human resources, with strategic management.
 - c. dispersed production, accounting, human resources, with centralized strategic management, and marketing.
 - d. dispersed production and marketing, with centralized accounting and strategic management.

Answer: d **Difficulty: Medium** **Reference: p. 602**

38. In terms of global business strategy, General Motors, DaimlerChrysler, and Intel fall into this category of firm.
- a. Domestic exporter
 - b. Multinational
 - c. Franchiser
 - d. Transnational

Answer: b **Difficulty: Medium** **Reference: p. 602**

39. In terms of global business strategy and structure, a franchise company will use a policy of:
- centralized production, accounting, marketing, human resources, with strategic management.
 - dispersed production, accounting, human resources, with centralized strategic management, and marketing.
 - dispersed production and marketing, with centralized accounting, human resources and strategic management.
 - dispersed production, marketing, and human resources, with centralized strategic management and finance/accounting.

Answer: d

Difficulty: Medium

Reference: p. 602

40. In terms of global business strategy, KFC falls into this category of firm.

- Domestic exporter
- Multinational
- Franchiser
- Transnational

Answer: c

Difficulty: Medium

Reference: p. 602

41. In terms of global business strategy, the governance of these firms has been likened to a federal structure—strong central management core of decision making, but considerable dispersal of power and financial resources.

- Domestic exporter
- Multinational
- Franchiser
- Transnational

Answer: d

Difficulty: Medium

Reference: p. 603

42. Citicorp, Sony, and Ford are attempting to make a transition to this type of business organizational structure.

- Domestic exporter
- Multinational
- Transnational
- Franchiser

Answer: c

Difficulty: Medium

Reference: p. 603

43. Centralized systems are those in which:
- development occurs at the home base and operations are handed over to autonomous units in foreign locations.
 - each foreign unit designs its own unique solutions and systems.
 - systems development and operations occur in an integrated and coordinated fashion across all units.
 - systems development and operations occur totally at the domestic home base.

Answer: d

Difficulty: Easy

Reference: p. 604

44. Duplicated systems are those in which:
- development occurs at the home base and operations are handed over to autonomous units in foreign locations.
 - each foreign unit designs its own unique solutions and systems.
 - systems development and operations occur in an integrated and coordinated fashion across all units.
 - foreign units design the solutions and systems used at the domestic home base.

Answer: a

Difficulty: Easy

Reference: p. 604

45. Networked systems are those in which:
- development occurs at the home base and operations are handed over to autonomous units in foreign locations.
 - each foreign unit designs its own unique solutions and systems.
 - systems development and operations occur in an integrated and coordinated fashion across all units.
 - foreign units design the solutions and systems used at the domestic home base.

Answer: c

Difficulty: Easy

Reference: p. 604

46. Domestic exporters have tended to use a _____ systems configuration, and seem now to be moving toward _____ systems.
- duplicated; decentralized
 - centralized; decentralized
 - networked; decentralized
 - decentralized; networked

Answer: b

Difficulty: Medium

Reference: p. 603

47. Multinational companies have tended to use a _____ systems configuration, and seem now to be switching to _____ systems.
- a. duplicated; decentralized
 - b. decentralized; duplicated
 - c. networked; duplicated
 - d. decentralized; networked

Answer: d **Difficulty: Medium** **Reference: p. 603**

48. Franchise companies have tended to use a _____ systems configuration, and seem now to be moving toward _____ systems.
- a. duplicated; decentralized
 - b. centralized; decentralized
 - c. decentralized; duplicated
 - d. decentralized; networked

Answer: a **Difficulty: Medium** **Reference: p. 603**

49. Transnational companies have tended to use a _____ systems configuration.
- a. duplicated
 - b. centralized
 - c. networked
 - d. decentralized

Answer: c **Difficulty: Medium** **Reference: p. 603**

50. The network systems structure is the most visible in _____ services.
- a. production
 - b. financial services
 - c. marketing
 - d. software design

Answer: b **Difficulty: Easy** **Reference: p. 604**

51. Effective networked systems must have:
- a. a powerful telecommunications backbone.
 - b. a culture of shared applications development.
 - c. a shared management culture that crosses cultural barriers.
 - d. all of the above.

Answer: d **Difficulty: Easy** **Reference: p. 604**

52. Based on your reading of the chapter case discussing Avnet Inc., Avnet mitigates the technical challenges posed by mergers and acquisitions by:
- using a “Playbook” of best practices to integrate a new company into the corporate global system.
 - using Web services to allow for communication between the acquired company and Avnet’s global system.
 - using a combination of regional best practices and using the best systems from each company.
 - pursuing a standardized implementation process as per the Avnet “Cookbook.”

Answer: c **Difficulty: Medium** **Reference: p. 605**

53. Two of the management challenges in developing global systems are listed in your text as:
- managing the privacy concerns of different countries and coordinating applications development.
 - creating a financial structure that will operate internationally and managing the privacy concerns of different countries.
 - agreeing on common user requirements and managing the privacy concerns of different countries.
 - coordinating of software releases and introducing of changes in business processes.

Answer: d **Difficulty: Hard** **Reference: p. 607**

54. Logically related tasks to produce specific business results best defines:
- information systems.
 - business processes.
 - SOPs.
 - core competencies.

Answer: b **Difficulty: Easy** **Reference: p. 608**

55. The way to identify core business processes is to conduct a(n):
- cost-benefit analysis.
 - work-flow analysis.
 - business process analysis.
 - feasibility analysis.

Answer: c **Difficulty: Medium** **Reference: p. 608**

56. Which systems are worth sharing on a transnational basis, from a cost and feasibility point of view?
- Only systems that support functions that are absolutely critical to the organization
 - Core systems and worthwhile provincial systems
 - Core systems and any financial systems that can be easily integrated with each other
 - Financial and accounting systems

Answer: a **Difficulty: Medium** **Reference: p. 608**

57. Based on your reading of the chapter, why should companies avoid implanting an all-encompassing, new global system when moving towards global operations?
- These may fail due to lack of visibility
 - Lack of power to convince senior management that transnational systems are worthwhile
 - “Grand design” approaches typically fail to identify centers of excellence
 - Opposition is strengthened because of requirements for huge resources

Answer: d **Difficulty: Hard** **Reference: p. 609**

58. The ability of global systems to optimize the use of corporate funds over a much larger capital base means that:
- capital in a surplus region can be moved efficiently to expand production of capital-starved regions.
 - capital costs can be accounted or spread over a larger base of constituents.
 - costs can be amortized over a larger customer base.
 - value chains can be synchronized more effectively.

Answer: c **Difficulty: Medium** **Reference: p. 610**

59. When developing a global system, bringing the opposition of local groups into the process of designing and implementing the solution without giving up control over the direction and nature of the change is called:
- cooptation.
 - change management.
 - implementation.
 - advocacy.

Answer: a **Difficulty: Easy** **Reference: p. 611**

60. In relation to global systems building, the Internet:
- a. allows the seamless flow of information through the enterprise.
 - b. affords local groups stable broadband access.
 - c. has reduced some networking problems.
 - d. all of the above.

Answer: c **Difficulty: Easy** **Reference: p. 612**

61. A critical necessity for ensuring the integration of local systems into a global system is:
- a. adherence to data and technical standards.
 - b. use of standard hardware at the local level.
 - c. use of standard user software at the local level.
 - d. all of the above.

Answer: a **Difficulty: Medium** **Reference: p. 612**

62. VPNs:
- a. use the public Internet for communications.
 - b. may not be able to support large numbers of remote users, due to the variable traffic on the Internet.
 - c. provide many of the same services as private networks.
 - d. all of the above.

Answer: d **Difficulty: Medium** **Reference: p. 613**

63. Some domestic firms are outsourcing systems development work or maintenance of existing systems to external vendors in another country, a process known as:
- a. domestic outsourcing.
 - b. offshore software outsourcing.
 - c. foreign franchising.
 - d. global development.

Answer: b **Difficulty: Easy** **Reference: p. 614**

64. Which types of systems are widely used by manufacturing and distribution firms to connect to suppliers on a global basis?
- a. TPS systems
 - b. EDI systems
 - c. CRM systems
 - d. None of the above

Answer: b **Difficulty: Easy** **Reference: p. 614**

65. One cost of offshore software outsourcing is knowledge transfer costs. This refers to:
- the time it takes to transfer work to an outsourcer.
 - the loss of knowledge that accompanies layoffs when jobs are lost to outsourcers as well as retention bonuses to keep staff working long enough to share their knowledge.
 - the time, documentation, travel costs, and other costs it takes to ensure the outsourcer understands your business and project requirements.
 - the time it takes to transfer core data for a system to an outsourcer.

Answer: c

Difficulty: Medium

Reference: p. 615

66. For their software development methodology, software outsourcing companies in India typically use:
- the same development models as U.S. companies.
 - the Unified Modeling Language.
 - the Capability Maturity Model.
 - rational Unified Process.

Answer: c

Difficulty: Hard

Reference: p. 616

67. The potentially most expensive “hidden” cost component of offshore software outsourcing is the cost of:
- selecting a vendor.
 - transferring work to the offshore outsourcer.
 - laying off domestic employees.
 - adjusting to cultural differences.

Answer: d

Difficulty: Hard

Reference: pp. 616–617

68. The potentially least expensive “hidden” cost component of offshore software outsourcing is the cost of:
- selecting a vendor.
 - transferring work to the offshore outsourcer.
 - laying off domestic employees.
 - adjusting to cultural differences.

Answer: a

Difficulty: Hard

Reference: pp. 616–617

69. As per your reading of the chapter case discussing overseas outsourcing, the outsourcing support the United States receives from India will lead to:
- tremendous loss of jobs in the IT sector.
 - a severe IT labor shortage in the United States.
 - rise in systems cost.
 - reduction of spending on systems costs.

Answer: d

Difficulty: Medium

Reference: p. 619

70. According to the chapter case discussing Nestlé's new information systems, what was the chief implementation challenge?
- Incompatible legacy systems
 - Resistance from managers
 - Resistance from rank-and-file employees
 - Lack of standard business processes

Answer: b

Difficulty: Easy

Reference: p. 626

Fill in the Blanks

71. A(n) ***business driver*** is a force in the environment to which businesses must respond and that influences the direction of business.

Difficulty: Easy

Reference: p. 572

72. A(n) ***global market*** is formed by consumers around the world who are interested in consuming similar products that are culturally approved.

Difficulty: Medium

Reference: p. 599

73. Japanese consumers who only want to purchase products made in Japan are an example of cultural ***particularism***.

Difficulty: Medium

Reference: p. 600

74. The movement of information across international boundaries is called ***transborder data flow***.

Difficulty: Easy

Reference: p. 600

75. A(n) ***franchiser*** is a firm where a product is created and initially produced in the home country, but must rely heavily on foreign personnel for further production, marketing, and human resources.

Difficulty: Easy

Reference: p. 602

76. In a global system configuration, a ***networked*** system is one in which systems development and operations occur in an integrated and coordinated fashion across all units.

Difficulty: Easy

Reference: p. 604

77. ***Core systems*** support functions that are absolutely critical to the organization.

Difficulty: Easy

Reference: p. 608

78. Cooptation is defined as bringing the opposing local organization groups into the process of designing and implementing an information systems solution without giving up control over the direction and nature of the change.

Difficulty: Hard

Reference: p. 611

79. Companies now outsource some of their new systems development work to external vendors in another country. This practice is called offshore software outsourcing.

Difficulty: Medium

Reference: p. 614

80. Legitimacy is defined as the extent to which your authority is accepted on grounds of competence, the vision, or other qualities.

Difficulty: Medium

Reference: p. 610

Essay Questions

81. **What steps do the authors recommend be taken to develop an international information systems architecture?**

- Begin by developing an understanding of the overall market forces, or business drivers, that are pushing your industry toward global competition, i.e., the global environment. Also examine the inhibitors or negative factors that could scuttle the development of a global business.
- Develop a corporate strategy for competing in the global environment.
- Plan how to structure your organization so that it can pursue the strategy you have developed.
- Consider the management issues in implementing your strategy and making the organization design a reality. The key here will be the design of business procedures.
- Consider the technology platform. You must have a corporate strategy instructor before you can choose the right technology.

Difficulty: Medium

Reference: pp. 597–598

82. . **List at least four general cultural factors and four specific business factors driving global business. Which two factors (one of each) do you feel are most problematic at the current moment? Why?**

- **General Cultural Factors:** Global communication and transportation technologies, development of the global culture, emergency global social norms, political stability, and a global knowledge base
- **Specific Business Factors:** Global markets, global production operations, global coordination, global workforce, and global economies of scale

One answer might be that two general cultural factors most in danger at the current moment are political stability and development of a global culture (either would be a good answer). Two business factors most problematic at the moment are global coordination and global workforce. Coordinating work on a truly global scale requires a fairly high level of corporation sophistication that only a small number of large firms are truly capable of on a real-time basis; and there is significant opposition in both developed and underdeveloped countries to changes in local labor markets which are threatened by global trade.

Difficulty: Medium

Reference: p. 598

83. **What are the four specific types of business challenges to global business systems? Which one do you think will be easiest to solve? Why?**

- **Standards:** Different EDI, e-mail, telecommunications standards.
- **Reliability:** Phone networks are not uniformly reliable.
- **Speed:** Different data transfer speeds; many are slower than United States speeds.
- **Personnel:** Shortages of skilled consultants.

Answers will vary, but an example answer is: The easiest challenge to solve is that of standards, because of the growth of universal, Internet-based standards, Web services, and component-based programming.

Difficulty: Medium

Reference: pp. 599–601

84. **How do cultural, legal, political, and social expectations affect global business?**

At a cultural level, **particularism** in all its forms rejects the very concept of a shared global culture and rejects the penetration of domestic markets by foreign goods and services. Differences among cultures produce differences in social expectations, politics, and ultimately in legal rules. Different cultures produce different political regimes, with different laws governing the movement of information, information privacy of their citizens, origins of software and hardware in systems, and radio and satellite telecommunications. Even the hours of business and terms of business trade vary greatly across political cultures.

Cultural and political differences profoundly affect organizations' standard operating procedures. Everything from the different reliability of telephone systems to the shortage of skilled consultants creates barriers.

National laws and traditions have created different accounting practices in various countries, which impact the way profits and losses are analyzed. These accounting practices are tightly intertwined with each country's legal system, business philosophy, and tax code.

Cultural differences can also affect the way organizations use information technology. Japanese firms, for example, use fax technologies intensively but are not comfortable with e-mail.

Language is a significant barrier. Software may have to be built with local language interfaces before a new information system can be successfully implemented.

Currency fluctuations can play havoc with planning models and projections. Some of these problems will diminish in parts of the world when the euro becomes more widely used.

Although the text does not mention this, differences in religious practice (especially if the state promotes a specific religion) can create almost insurmountable problems.

Difficulty: Difficult

Reference: pp. 598–601

85. **What are the organizational principles a company should follow to develop a global company and its information systems support structure? Do you agree? Would you change these principles, or add others? Support your answer.**

- Organize value-adding activities along lines of comparative advantage.
- Develop and operate systems units at each level of corporate activity—regional, national, an international.
- Establish, at world headquarters, a single office responsible for development of international systems, a global chief information officer position.

Difficulty: Easy

Reference: p. 604

86. **Identify at least five problems associated with international networks.**

- Costs and tariffs
- Network management
- Installation delays
- Poor quality of international services
- Regulatory constraints
- Changing user requirements
- Disparate standards
- Network capacity

Difficulty: Easy

Reference: pp. 612–613

87. **List at least four difficult problems for management in the development of the international information system.**

- Agreeing on user requirements
- Introducing changes in business processes
- Coordinating applications development
- Coordinating software releases
- Encouraging local users to support global systems

Difficulty: Medium

Reference: pp. 606–607

88. *Evaluation*

You are working for a global electronic parts manufacturing company with divisions in Taiwan, Malaysia, Australia, and Germany, that has embarked on developing a global enterprise system. To ensure that overseas divisions comply with the new system, they are considering a cooptation strategy in which they will permit each country unit the opportunity to develop one transnational application first in its home territory, and then throughout the world. What are the benefits and drawbacks to this approach? Are there any other solutions for the company's cooptation strategy?

With this strategy, local units will feel a sense of ownership in the transnational effort. On the downside, this assumes the ability to develop high-quality systems is widely distributed, and that, a German team can successfully implement systems in Taiwan or Malaysia. This will not always be the case. Another cooptation strategy would be to develop new transnational centers of excellence, or a single center of excellence. In this, you would identify a regional location with excellent implementation of specific business processes. These centers draw heavily from local national units, are based on multinational teams, and must report to worldwide management. The centers of excellence would perform the initial identification and specification of business processes, define the information requirements, perform the business and systems analysis, and accomplish all design and testing. Implementation, however, and pilot testing are rolled out to other parts of the globe. Recruiting a wide range of local groups to transnational centers of excellence helps send the message that all significant groups are involved in the design and will have an influence.

Difficulty: Difficult

Reference: p. 611

89. **What options does a company have for providing international connectivity?**

They can build their own international private network, rely on a network service based on the public switched networks throughout the world, or use the Internet and intranets.

Difficulty: Easy

Reference: pp. 612–613

90. *Synthesis*

How does the Internet benefit the development of a global information system? Should all global systems be based on the Internet?

The Internet allows anyone connected to it to communicate and compute at any time, or anywhere. Satellite systems, digital cell phones, and personal communications services will make it even easier to coordinate work and information in many parts of the globe that cannot be reached by existing ground-based systems. Companies can use Internet technology to construct virtual private networks to reduce wide area networking costs and staffing requirements. If it wishes, the company can outsource the virtual private network to an Internet service provider.

All global systems can't be based primarily on the Internet, because currently not all countries have the same access to the Internet. Additionally, high-traffic volumes at certain times of the day in various regions may impede responsiveness.

Difficulty: Medium

Reference: p. 613

Synthesis in terms of formulate