

Part A:

Short Answer Questions

Answer ALL questions from this section - Each question contains sub questions. Total mark for this section is 50.

QUESTION 1 (10 Marks- 5 each) - This question contains two sub questions a and b.

- Describe the use of personalization and customization in e-commerce. What business value do these techniques have?
- Why has the Internet made competitive rivalry more intense?

QUESTION 2 (10 Marks- 5 each)- This question contains two sub questions a and b.

- Explain the importance of data mining tools and the types of information they produce. In what type of circumstance would you advise a company to use data mining?
- Define the term 'database'? List 3 reasons why DBMS are better systems compared with flat files.

QUESTION 3 (10 Marks- 5 each) - This question contains two sub questions a and b.

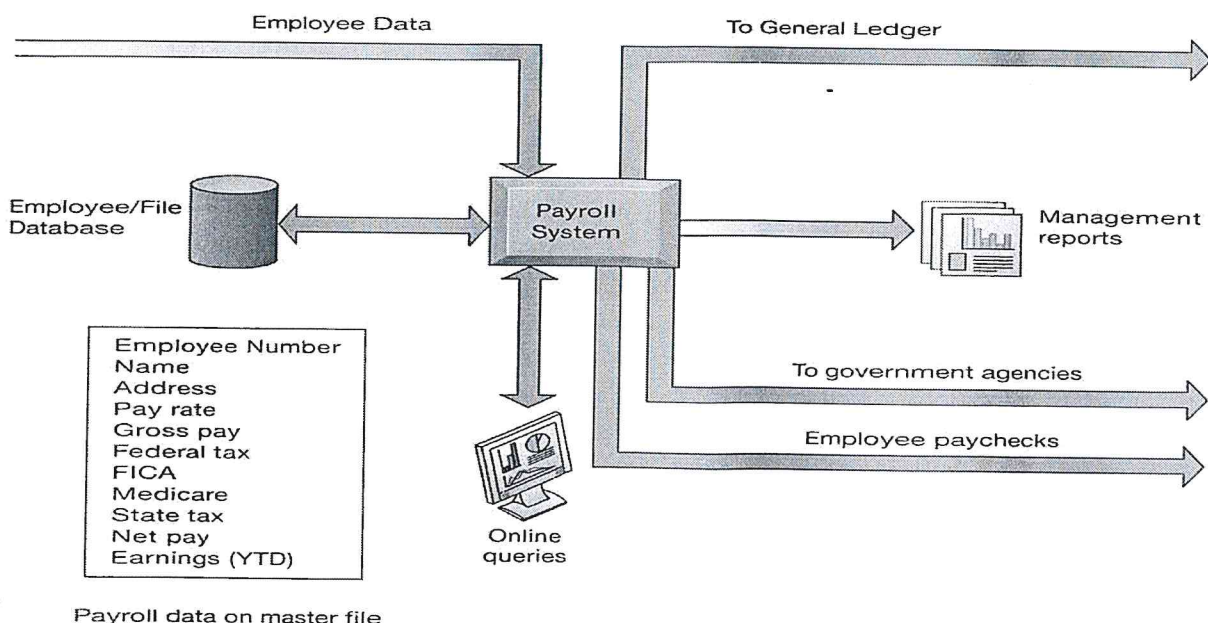
- What is a GIS? Describe at least three ways in which a GIS could be used by modern business.
- Describe at least two benefits of using enterprise systems.

QUESTION 4 (10 Marks- 5 each)- This question contains two sub questions a and b.

- Authentication technologies that can be used to prevent hackers from gaining access to organizational systems. Discuss.
- Information ethics govern the ethical and moral issues arising from the development and use of information technologies, as well as the creation, collection, duplication, distribution, and processing of information itself (with or without the aid of computer technologies. Organizations should implement certain e-policies to protect themselves. Discuss.

QUESTION 5 (10 Marks- 5 each)- This question contains two sub questions a and b.

- Analyse the illustration below. What type of IS does it represent? Why? At what organizational level is this IS used?



IS Type	Justification	Organisational Level

b. What are the benefits of the sociotechnical design approach to information systems?

Part B:

Article/Application Questions

Global Business Systems

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 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.

There are several challenges involved with international networks. For example: quality of service — the public Internet doesn't guarantee any level of service; security — most companies use private networks to communicate data and do not trust the security of the public Internet; costs and tariffs; network management — not all countries support basic Internet service; installation delays; poor quality of international service — Internet connectivity varies worldwide; regulatory constraints — some countries employ comprehensive blocking and monitoring techniques, slowing down traffic; network capacity — the Internet can support different amounts of traffic at different times depending on worldwide usage.

There are several steps that should be taken to develop an international information systems architecture. Some of which are: beginning 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; developing a corporate strategy for competing in the global environment; planning how to structure your organization so that it can pursue the strategy you have developed; considering the management issues in implementing your strategy and making the organization design a reality. The key here will be the design of business procedures; considering the technology platform; having a corporate strategy instructor before choosing the right technology.

There are general cultural factors and business factors driving global business. General cultural factors include global communication and transportation technologies, development of the global culture, emergency global social norms, political stability, and a global knowledge base. Specific business factors include global markets, global production operations, global coordination, global workforce, and global economies of scale.

Two of the general cultural factors that are 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 under-developed countries to changes in local labor markets which are threatened by global trade.

Some specific types of business challenges to global business systems are: 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. Probably, the easiest challenge to solve is that of standards because of the growth of universal, Internet-based standards, Web services, and component-based programming.

In fact, 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. 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.

Some of the organizational principles a company should follow to develop a global company and its information systems support structure are: organized value-adding activities along lines of comparative advantage; develop and operate systems units at each level of corporate activity — regional, national, and international; establish at world headquarters a single office responsible for development of international systems, a global chief information officer position.

Some of the general benefits of implementing a global information system for retailers, as an example, include: superior management and coordination. This may not show up on balance sheets, but will affect profitability in the long run. Related benefits are the ability to switch suppliers quickly if there is a crisis and the ability to use excess capacity in one region to fulfill demand in another. Additionally, they can expect major improvements in production, operation, and supply and distribution. Value-adding activities can be concentrated in regions where they are most economical and efficient. Also, with global systems, fixed costs around the world can be amortized over a much larger customer base. In addition, corporate funds can be used over a much larger capital base.

QUESTIONS (5 marks each).

Answer **ALL** questions from this section - Total mark for this section is 40.

- a. What steps should you take to develop an international information systems architecture?
- b. What are the four specific types of business challenges to global business systems? Which one do you think will be easiest to solve? Why?
- c. How does the Internet benefit the development of a global information system? Should all global systems be based on the Internet?
- d. Explore the Web for the latest World Internet Users Population Stats for 2019 comparing at least 4 regions (for example: Africa, Asia, Europe, Middle East) in terms of Internet users distribution % and penetration rate (% population).
- e. Apply Porter's Five Forces analytical framework to the Internet. Your answer should include critical elements supported with evidence/ justification.
- f. 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?
- g. You work for a business consulting firm, and you have been asked to advise a home furniture retailer on implementing a global information system. What general benefits can the retailer expect from a globalized system?
- h. List and describe four of the challenges involved with international networks.

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