

PART A (60 questions – 1 mark each).

1. Which of the following are types of Information Systems?:

- A) MIS, TPS, DSS
- B) URL, HTTP, XML
- C) HTML, ASCII, WWW
- D) UML, USB, SCM

2. When considering data and information,:

- A) data is a collection of unorganized facts and information is data that has been transformed into something useful
- B) data is unimportant and businesses should only consider information
- C) data is critical when developing a solution to a problem while information should be considered only occasionally
- D) data and information refer to the same thing

3. The Internet generates business value by:

- A) enabling the buying and selling of goods
- B) protecting domestic markets from foreign competition
- C) promoting trade barriers in areas of the world that are underdeveloped
- D) ensuring compliance of government legislation regarding foreign investment

4. You needed to purchase a new computer system for your office. You have narrowed down your choices from several alternatives. This is an example of a/an _____.

- A) input
- B) output
- C) decision
- D) knowledge
- E) wisdom

5. Globalisation means:

- A) that modern businesses are using information technology to expand their market
- B) to find the lowest cost suppliers regardless of location
- C) to create 24 hour business days by shovelling work across time zones and nations
- D) all of the above
- E) none of the above

6. According to the text, in today's work environment, it's impossible to do knowledge work without:

- A) Technology
- B) Information
- C) Knowledge
- D) Money
- E) All of the above

7. Computer monitors, printers, speakers and MP3 players are examples of:

- a) Input devices
- b) Output devices
- c) Processing devices
- d) Storage devices
- e) None of the above

8. A/An _____ application is an example of utility software that helps guard your computer against unauthorized access when connected to a network.

- a) driver
- b) firewall
- c) anti-virus
- d) malware

9. Today, the fastest-growing network is arguably our global computer network, known as the

- a) Internet
- b) Extranet
- c) Intranet
- d) None of the above

10. ISP stands for:

- a) Internet supply provider
- b) Internet service provider
- c) Internet server provider
- d) Internet support provider

11. _____ is the popular name for 802.11 standards for wireless network access.

- a) Wi-Fi
- b) VoIP
- c) Cloud
- d) TCP/IP

12. The internet is currently using IPv4. What is the next version that will be employed?

- a) IPv6
- b) IPv4.1
- c) IPv5
- d) None of the above

13. A _____ is a software application that allows you to easily navigate the Web and to view the content that you find there

- a) Web Server
- b) Web browser
- c) Search engine
- d) None of the above

14. Which of the following is not one of the four primary components of a typical e-commerce site?:

- a) the shopping and ordering system
- b) the customer account
- c) the payment gateway
- d) the security system

15. A program that is able to copy itself and infect a computer is called:

- a) Malware
- b) Scareware
- c) Virus
- d) Worm

16. _____ is a method of publishing audio programs via the Internet that allows users of just about any digital audio device to download broadcasts or to subscribe to a feed of new files (usually MP3s)

- a) Podcasting
- b) Blogging
- c) Vlogging
- d) Broadcasting

17 A _____ is a group of people who work across geographic distance.

- a) Dispersed team
- b) Localized team
- c) Dedicated team
- d) Virtual team

18. Which of the following is not a goal of Business Process Reengineering?

- a) reduce costs
- b) increase throughput
- c) increase speed
- d) increase satisfaction

19 One of the first ways that a business seeks to apply IT is through:

- a) Communicating
- b) Transforming
- c) Automating
- d) Informating

20. A/An _____ is one that can be programmed; it is routine or repetitive.

- a) Unstructured decision
- b) Fully-structured decision
- c) Structured decision
- d) Semi-structured decision

21. _____ is the ability to create business value with the least cost.

- a) Productivity
- b) Efficiency
- c) Analysis Paralysis

d) Effectiveness

22. _____ refers to a series of steps or a process (logical sequence of activities) taken in response to some event or activity

- a) Conflict resolution
- b) Debriefing
- c) Problem solving
- d) Situational Review

23. Referred to as _____, they focus on the activities of the functional department to improve its efficiency and effectiveness.

- a) functional information systems (FIS)
- b) workflow management system (WMS)
- c) point-of-sale (POS)
- d) transaction processing system (TPS)

24. Most retail stores use a _____ to capture and store much of the data about their products.

- a) functional information systems (FIS)
- b) workflow management system (WMS)
- c) point-of-sale (POS)
- d) transaction processing system (TPS)

25. A/An _____ enters, tracks, routes, and processes the many documents used in an organization.

- a) Executive information systems (EIS)
- b) Document management systems (DMS)
- c) Enterprise resource planning (ERP)
- d) Logistics management systems (LMS)

26. To support tacit knowledge, knowledge management systems often rely on collaborative software, which supports teamwork with technologies that enable communication and sharing of data and information. This category is known as:

- a) Shareware
- b) Freeware
- c) Groupware
- d) Software
- e) Hardware

27. Which term relates to the technical capabilities that allow systems to connect with one another through standardized interfaces called Web services?

- a. Enterprise Resource Planning
- b. Supply Chain Management
- c. Architecture
- d. Service-Oriented Architecture
- e. None of the above

28. With respect to _____, IT can provide important data for executive decision making in setting goals and strategies that align with an organization's mission and that mitigate business risk.

- a) Strategy

- b) Operations
- c) Reporting
- d) Compliance

29. The quality and quantity of information about products and services of interest to buyers has increased. This defines:

- a) information density
- b) personalization
- c) niche markets
- d) perfect markets

30. Which of the following is a benefit to the business in B2C e-commerce?

- a) Lower prices
- b) Shopping 24/7
- c) Greater searchability of products worldwide
- d) Shorter delivery times for digital products
- e) Cheaper electronic transactions

31. _____key encryption uses the same private key to encrypt and decrypt a message. a) Public

- b) Combo
- c) Primary
- d) Private

32. When there is an auction when the bidder with the lowest bid wins, it is called a:

- a) Reverse auction
- b) Low auction
- c) Backwards auction
- d) Sellers auction

33. The traditional procurement process has three key elements. Which of the following is not one of them?:

- a) the purchase order
- b) the invoice
- c) the delivery of goods
- d) the receipt of goods

34. B2B transactions can be divided into two types, namely _____and _____. a) spot buying, strategic sourcing

- b) outsourcing, EDI
- c) e-commerce, outsourcing
- d) strategic sourcing, e-commerce
- e) spot buying, e-commerce

35. Financial accounting (FI) documents, management accounting or controlling (CO) documents, and material documents are referred to as

- a. Transaction Documents
- b. Transaction Data
- c. Material Group
- d. Virtual Documents
- e. None of the above

36. A collection of fields is known as a:

- a) Table
- b) Entry
- c) Category
- d) Record
- e) Database

37. The primary method for accessing and using data in an RDBMS is a:

- a) Inquiry
- b) Query
- c) Investigation
- d) Analysis

38. A _____ extracts and reorganizes subject-area-specific data to allow business professionals to focus on a specific subject area.

- a) Data Model
- b) Data Warehouse
- c) Data Mine
- d) Data Mart

39. The primary technology used to store, manage, and allow efficient access to data is the:

- a) database
- b) data warehouse
- c) data farm
- d) cloud computing
- e) computer network

40. Off-shoring is:

- a) partnership with a business in a distant country
- b) partnership with a business outside your country but in the same general geographical area as your business
- c) partnership in the same country as a business
- d) we do it ourselves

41. Which of the following is not an advantage of outsourcing?

- a) High level of skill and expertise
- b) Internal staff provides project oversight
- c) Distraction of in-house IS staff from other duties
- d) Generally lower time and costs

42. A/An _____ actually creates the system itself by coding and deploying the technical infrastructure of the system and programming it to perform required tasks.

- a) Project manager

- b) Project sponsor
- c) Account manager

- d) Analyst
- e) Developer

43. Once the system is up and running, the organization must continuously monitor, maintain, and evaluate it. This describes which phase in the SDLC?

- a) Construction
- b) Transition
- c) Production
- d) Retirement

44. A/An _____ is a simplified representation of something real, such as a building, weather pattern, or information system that business professionals can manipulate to study the real item in more detail.

- a) Prototype
- b) Model
- c) UML
- d) HTML

45. _____ has become a very popular modelling tool, as it works particularly well for developing object-oriented systems.

- a) Hypertext Markup Language (HTML)
- b) Extensible Markup Language (XML)
- c) Unified Modelling Language (UML)
- d) Integrated Development Environments (IDEs)

46. _____ is the use of computer-based support in the software development process.

- a) Code generation
- b) CASE tools
- c) Use case diagrams
- d) Sequence diagrams
- e) Unified Modelling Language (UML)

47. Project _____ is “the application of knowledge skills, tools, and techniques to project activities to meet project requirements.”

- a) Planning
- b) Inception
- c) Scope
- d) Management
- e) Retirement

48. YouTube, Blogger, Twitter, and Facebook are all examples of:

- a) the social web
- b) Web 2.0
- c) sites supporting personal interaction
- d) all of the above

49. The term “social utility” is used to describe:

- a) your need to feel like you get a return on your time investment when using a social media site
- b) finding ways to welcome new people into an online group
- c) how a user's social experience is validated
- d) how usability features can encourage online participation

50. Compression technologies are used to:

- a) allow images to be stored more efficiently
- b) allow video to be transmitted more efficiently
- c) make sure websites are coded and implemented more efficiently
- d) all of the above

51. It is clear that _____ and _____ are critical components to building a successful interactive media site.

- a) design, usability
- b) interaction, ease of use
- c) utility, support
- d) environment, participation

52. Folksonomy can be described as:

- a) tags
- b) collective cloud tag
- c) viral social interactions
- d) mashups

53. When the World Wide Web started to become more prominent in the mid 1990s, marketers saw it as an opportunity for:

- a) direct marketing
- b) indirect marketing
- c) product reviews
- d) information dissemination

54. Concerns about banning social networking sites at work include:

- a) the message management is sending the message that social computing does not belong in the business realm
- b) it tells employees that they are not trusted
- c) it doesn't recognize that work is viewed as an ongoing activity woven into a 24-hour period
- d) all of the above

55. Which of the following is an example of competitive intelligence?

- a) using a bootleg copy of software

- b) having someone pose as a potential customer to get pricing information
- c) cutting and pasting information into a document without citing the source
- d) sending emails to accounts with the authorization of the account owner

56. PIPEDA stands for:

- a) Privacy, Information Protection, and Ethics Domestic Act
- b) Personal Information Protection and Electronic Documents Act
- c) Privacy, Information, Protective Enterprise Distribution Act
- d) Provincial Information Protection and Electronic Documents Act

57. Within the organization the officer most responsible for IT is called the:

- a) CEO
- b) COO
- c) CIO
- d) CFO

58. The semantic web focuses on:

- a) content
- b) searchability
- c) interpretability
- d) all of the above

59. The primary focus of IT governance is on:

- a) decision rights associated with it
- b) information processing
- c) network vulnerabilities
- d) technology acquisition and modernization

60. Ethics is closely linked to:

- a) religion
- b) morality and a society's widely shared understanding of what is right and wrong
- c) an individual's personal values
- d) an individual's moral codes

PART B (Database - 10 marks).

The data model of a health centre is shown below. In this centre, a therapist admits a patient who requires a treatment. Depending on their health problems, patients are given a room in one of the many units (e.g., chiropractic, physiotherapy, acupuncture, etc.). Each unit is located on a different floor and has many rooms. All rooms are private, that is, there is only one patient per room.

Complete the following requirements.

- Underline the Primary Keys in the data model below
- Circle the Foreign Keys in the data model below
- Create (draw) the link between the tables and show their cardinality

Therapist
Therapist ID
Name
Specialty
Date of Birth
Email

Patient
Name
Admit Date
Patient ID
Therapist ID
Room #
Date of Birth

Room
Room #
Phone #
Unit Name

Unit
Unit Name
Floor Number
Phone #

PART C (Essay questions – 30 marks).

Question 1 (6 marks)

To answer the 2 following questions, imagine you are in charge of the marketing department of Toyota.

- a) Which 3 social networking sites would you monitor to stay on top of potential brandstorms? (3 marks)

- b) What would give you the indication that something is going viral? (3 marks)

Question 2 (12 marks)

Gupta is the project manager for a big software acquisition for his company. His company, CanFruits, develops and manufactures agricultural products, such as specialized seeds for different growing conditions. The new software to be acquired is a production-planning software package that is intended to support much of the planning and development process at CanFruits. Gupta has a lot of experience managing the development of in-house software packages, and developing the package in-house is one option. Another option he has recently heard about is a production-planning software package that is being developed using open-source development approaches. He intends to investigate both options carefully.

- a) If Gupta decided to build the software package in-house, he would do it as a project and use project management tools. Some of these tools help schedule project activities. Identify and briefly describe two project management scheduling tools that Gupta could use. (3 marks)

b) Gupta is also familiar with CASE tools that he thinks could help with an in-house development project. Briefly define what CASE tools are. Explain one benefit of using CASE tools. (3 marks)

c) The second option Gupta has is an open-source software option. Define open-source software. Briefly describe how open-source software is developed. (3 marks)

d) Gupta has never used open-source software before. Explain two advantages and one disadvantage to using open-source software. (3 marks)

Question 3 (12 marks)

After graduating from Concordia, an MIS major has been hired as business analyst trainee at a growing company. He was fortunate to join the company during that time, because the MIS department was embarking on an ambitious process of revamping the company's information systems. The department needs to identify business needs and provide the company with systems that meet the demands of a larger company with more diversified products and markets. Decisions that have to be made include what new systems may be needed, whether to build, buy, or lease these systems, and what the priorities are, as there are normally not enough budget to start with all needed projects simultaneously.

As a trainee, the MIS graduate gets the precious opportunity of attending the meetings between business analysts and "business clients", or key decision makers from various business departments. Every analyst needs to meet their respective client from business and hold a number of interviews to gain an in depth look at their data and information needs and, if they already have a system in place, what they want that the current system cannot satisfy.

For the first meeting (Meeting A), the trainee met with a high-ranking business executive. After describing his needs, the executive suggested that the company probably needed a database to meet those needs. In a subsequent meeting with the MIS department manager, he asks the trainee about his thoughts, and whether he agrees with the executive. The trainee's opinion was that what was actually needed was a data warehouse rather than just a database.

On the second meeting (Meeting B), the trainee met with a business manager who was concerned about an issue with the current system as it did not help much when it comes to pricing decisions. Specifically, there was a need for a system that would provide analytical and visualization capabilities that would enable decision makers to analyze various pricing levels and identify the effect each price might have on sales and profitability.

In the third meeting, (Meeting C) the trainee met with the CEO of the company that expressed a main concern. He explained that across the company, there are a number of functional applications servicing different departments. However, these systems were not originally designed "to talk" to each other and exchange data. As the organization has grown considerably, there is now a need for a system that can integrate the data from all these functions and streamline processes across the organization. This would ensure more efficiency of operations, and would result in considerable cost savings.

From the fourth (Meeting D), the trainee learned that a system was needed to store and manage vast amounts of data. This data, while useful, is not highly sensitive. For example, it does not include private information such as customer's credit card number. The system is needed as soon as possible as the company's current storage capacity is approaching its limits. Moreover, any solution suggested should not be costly, as the system in question – while needed for proper operations- is not particularly expected to provide the company with a competitive advantage.

In the fifth meeting (Meeting E) and last one, the trainee meets with an employee that takes care of accounts payable in the accounting department. The employee would like to purchase an off-the-shelf accounts payable software package and customize it to fit the needs of the department. The department currently has a manual accounts payable system, and the future users of the new system have little experience using a computer system and are not sure what they want in a computerized accounts payable system. They want this system to be implemented as soon as possible.

Answer the following questions about the business case:

1- In your opinion, why the trainee recommended a data warehouse rather than just a database? In order to justify your answer, identify three characteristics that differentiate a data warehouse from databases and let data warehouses serve different business needs than database do (2 marks).

Answer:

2- What information systems do you think the trainee should recommend in order to address the issue raised by the business manager in meeting B (justify your answer)? (2 marks)

Answer:

3- What information systems do you think the trainee should recommend in order to address the issue raised by the CEO in meeting C (Justify your answer)? (2 marks)

Answer:

4. After Meeting D, based on the brief description provided, and knowing that there is no plan to buy such a system, what should the trainee suggest to the company? Should the trainee suggest that the company builds the system or leases it (through either SAAS or ASP) (justify your answer)? (2 marks)

Answer:

5. Assume that the recommendation made after meeting D was to build the system. What are two advantages and disadvantages of in-house development versus outsourcing for the system in question? (2 marks)

Answer:

6. The systems development life cycle (SDLC) and prototyping are systems development approaches that organizations use to develop their information systems. Although these approaches can be combined, alone they offer distinct alternative ways to develop systems.

For system discussed in meeting E, identify whether the SDLC or the prototyping approach (not a combination) is most appropriate and explain why (2 marks).

Answer:

Answers Multiple Choice

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

52-B
53-A
54-D
55-B
56-B
57-C
58-D
59-A
60-B