

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. The _____ structure is quite different from that of a transactional database.

- a) data warehouse
- b) workgroup database
- c) enterprise database
- d) distributed database
- e) None of the above

24. Students and classes have a _____ relationship.

- a) one-to-one
- b) one-to-many
- c) many-to-one
- d) many-to-many
- e) None of the above

25. A _____ key is a field that holds a unique value for each record.

- a) combination
- b) foreign
- c) primary
- d) private
- e) public

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. A(n) _____ database is structured with tables that are related to one another so data can be stored and retrieved efficiently.

- a) relational
- b) rational
- c) informational
- d) accessible

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. A specific combination of bits represents each data _____.
a) Character
b) Bit
c) Byte
d) Field

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(n) _____'s main function is to help you understand the complexities of the real-world environment.

- a) constraint
- b) entity
- c) model
- d) database
- e) None of the above

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.

- a) Underline the Primary Keys in the data model below
- b) Circle the Foreign Keys in the data model below
- c) 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 #

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)

Established in 1976 in Cupertino, California, Apple Inc. designs and markets computer hardware and software. It operates 357 retail stores in 10 countries and online stores. It is the largest publicly traded company in the world by market capitalization and the largest technology company in the world by revenue and profit. Fortune magazine named Apple the most admired company in the world in 2008, 2009, and 2010.

A cornerstone of Apple's business model revolves around products that are simple and elegant, that work together without any major problems. The way that Apple accomplishes this goal is with a combination of talented designers and total control over the product. Every Apple product ships only with apple software. Apple, like other IT industry hardware giants, such as Cisco Systems and Hewlett-Packard, were able to separate design and production using computer-based models and modular components. Apple's computers are designed in California, but manufactured in Shenzhen, China, by Taiwanese industrial giants Foxconn and Inventec.

When a consumer chooses to purchase a computer on the online Apple Store, he starts by creating an account on the Apple Store website. He is then presented with web pages in the language of his choice. He can choose and customize products, even get a product engraved. Once the order is completed, he can pay using any major credit card. For repeat customers, a one-click option is also available to expedite the process. For a first-time customer the whole process can be completed in a matter of a few minutes, giving customers the ability to move from thought to action nearly instantly. After the order is validated, the product is shipped within 2-3 days from the nearest storage depot to the customer. Storage depots exist in all regions of the globe. They are managed by an international third party logistics and shipping company, FedEx. If the product is not available at the storage depot or if a highly specialized (like a server or some of the high-end models) or a customized product is ordered (for example with engraving) , an electronic order is sent to the third-party factory. A custom product is then prepared and then shipped. In such cases, Apple commits to have the product delivered to the customer in no more than in 3-4 weeks. The customer has the ability to track the status of his order at all times. Once the product is received, the customer may also use the Apple website for after-sales support and warranty issues. When software is purchased the process is similar, but the product is shipped electronically in a matter of a few minutes after the order is validated.

Answer the following questions about the Apple business case: (1.2 marks each)

1- What e-commerce advantage is illustrated in this case?

2- What business model is implemented by Apple ?

3- When a customer orders a product from the on-line Apple store, what type of e-commerce is this?

4- When Apple sends an electronic order to Foxcom for a product to be custom-built and shipped to a customer, what type of e-commerce is this?

5- What primary value chain activities are outsourced by Apple ?

6- What support value chain activities are outsourced by Apple ?

7- Name 2 benefits for customers of the business model presented in this case ?

8- Name 2 limitations for customers of the business model presented in this case ?

9- Name 2 benefits for Apple of the business model presented in this case

10- Name 2 limitations for Apple of the business model presented in this case

