Overview

The ability to design and implement an information system solution to effectively manage vast amounts of information is a valuable skill that leads to the success of many business entities today. The use of technology to develop these information systems plays a crucial role in a business' ability to compete in today's business environment. This event provides recognition for FBLA members who demonstrate an understanding of and ability to apply these skills.

This event consists of two parts: an objective test and a role play. If competing as a team, the objective test is taken collaboratively by the team. The top fifteen individuals/teams scoring the highest on the objective test will advance to the final round and participate in the role play component. The role play case will be a decision-making problem outlining a small business' environment and needs. Competitors will analyze the situation and recommend an information system solution to address the issues raised.

This event is for an individual or a team of two or three members.

Competencies and Task Lists

http://www.fbla-pbl.org/competitive-event/management-information-systems/

Website Resources

- Association of Computing Machinery
  http://www.acm.org/
- Association for Information Systems
  http://www.aisnet.org/
- Decision Science Institute
  http://dsi-dev.org/
- IEEE - Advancing Technology for Humanity
  http://www.ieee.org/
- MIS Resources on the Internet
  http://www.brint.com/

MANAGEMENT INFORMATION SYSTEMS SAMPLE QUESTIONS

1) What is the first step of the systems development life cycle?
   A) preliminary analysis
   B) problem recognition
   C) initiation
   D) maintenance report of a problem

   Competency: Systems Analysis & Design

2) Which of the following questions cannot be answered through file access auditing?
A) Who is trying to read a file?
B) Who is trying to audit a file?
C) Who is trying to change file permissions?
D) Who is trying to modify a file?

Competency: Systems Analysis & Design

3) Modern operating architectures have been driven by what programming language?
A) C++
B) Unix
C) Cobol
D) C#

Competency: Systems Analysis & Design

4) Which one of the following methods fosters the greatest level of innovation?
A) Waterfall
B) Stage gate
C) Iterative
D) Spiral

Competency: Systems Analysis & Design

5) What is the measure of a system's actually delivered service to its promised service level?
A) program analysis
B) customer service analysis
C) systems analysis
D) gap analysis

Competency: Systems Analysis & Design

6) Correcting errors costs the most at what stage?
   A) requirements analysis
   B) disposition
   C) development
   D) design

   Competency: Systems Analysis & Design

7) The primary key field in a database does which one of the following?
   A) create linked lists
   B) identify duplicated data
   C) uniquely identify a record
   D) specify an entity

   Competency: Database Management and Modeling Concepts

8) What is a temporary detour in program logic?
   A) Control break
   B) Bypass
   C) Reset
   D) Work around

   Competency: Database Management and Modeling Concepts

9) Which of the following should a business follow for success?
   A) Technology choices should drive business strategies and goals
   B) Business processes should drive purchasing strategies
   C) Business processes should drive technology choices
   D) Technology choices should drive business processes

   Competency: Database Management and Modeling Concepts

10) What encompasses all of the information contained within a single business process or unit of work and its primary purpose is to support the performing of daily operational tasks?
    A) timeliness
    B) quality
    C) analytical information
    D) transactional information

    Competency: Database Management and Modeling Concepts

11) Which one of the following enables you to view data from a table based on a specific criterion?
A) query
B) macro
C) form
D) report

Competency: Database Management and Modeling Concepts

12) What type of key are the fields in a record that have some identifying information but typically do not identify the record with complete accuracy?
A) attribute keys
B) secondary keys
C) primary keys
D) duplicate keys

Competency: Database Management and Modeling Concepts

13) What is a nominative type system which **cannot** be instantiated directly?
A) an object type
B) a subject class
C) an abstract type
D) a relational construct

Competency: Object Oriented Analysis and Design

14) What stage of OOSD is the analysis of user needs and programmer requirements done?
A) planning
B) design
C) requirements analysis
D) system concept development

Competency: Object Oriented Analysis and Design

15) When does the documentation of the system occur?
   A) requirements
   B) in many steps
   C) test and maintenance
   D) implementation

   Competency: Object Oriented Analysis and Design

16) What refers to how well a system can adapt to increased demands?
   A) reliability
   B) capacity planning
   C) availability
   D) scalability

   Competency: Object Oriented Analysis and Design

17) What type of analysis is added to a model that involves the narrative text of use cases and identifying a first-guess set of objects that will participate in each use case, then classifies these objects into three types?
   A) Robustness analysis
   B) Design analysis
   C) Detailed analysis
   D) Problem analysis

   Competency: Object Oriented Analysis and Design

18) In the domain model relationships may be:
   A) bi-directional
   B) omni-directional
   C) multi-directional
   D) mono-directional

   Competency: Object Oriented Analysis and Design

19) If a solution to a particular problem is not vital to the functioning of an organization and management is willing to overlook the causes of the conflict, managers may choose to use which type of conflict resolution?
A) dominance
B) confrontation
C) avoidance
D) compromise

Competency: User Interfaces

20) Changes to computer interfaces must prioritize issues pertaining to which one of the following?
A) operating system
B) system users
C) system software
D) system hardware

Competency: User Interfaces

21) The first step to getting output from a laser is to excite an active medium. What is this process called?
A) priming
B) raising
C) pumping
D) exciting

Competency: User Interfaces

22) What type of object is used to find answers to questions about the data in a database?
A) query
B) macro
C) module
D) form

Competency: User Interfaces

23) What data type in Access can be described as pictures, sound or video clips, or other files created in another application?

A) memo

B) ole object

C) currency

D) hyperlink

Competency: User Interfaces

24) Transmission Control Protocol/Internet Protocol (TCP/IP) is a collection of protocols that help manage Internet communication. Each computer running TCP/IP must have a unique IP address assigned to it. Which of the following statements best describes an IP address?

A) An IP address is no more than your dial-up telephone number.

B) IP addresses are composed of four numbers, each of which is between 1 and 256. These numbers can be automatically provided or assigned by a system administrator.

C) An IP address is a set of four numbers, each of which must be from 0 to 255. These numbers can be automatically provided or assigned by a system administrator.

D) An IP address is a set of three numbers, each of which must be from 0 to 255. An IP address is a unique name that identifies the computer within a network. This name can be automatically provided or assigned by a system administrator.

Competency: System Controls

25) Which one of the following is the organized process of a set of steps that needs to be followed to analyze, develop, and implement a new information system?

A) program specification

B) design cycle

C) analytical cycle

D) system development life cycle

Competency: System Controls

26) What is a structured approach to building an information system?
A) program specification
B) design cycle
C) analytical cycle
D) system development life cycle

Competency: System Controls

27) What is the most important difference between VPN and SSL among the following?
A) processing speed
B) technical support
C) bandwidth
D) security

Competency: System Controls

28) The most frequently used instructions of a computer program are likely to be fetched from:
A) ram
B) cache
C) the hard drive
D) registers

Competency: Defining System and Business Requirements

29) What is the ability of a computer's operating system to automatically configure a new device as you install it?
A) performance monitor
B) auto driver
C) plug and play
D) automatic update

Competency: Defining System and Business Requirements

30) What is copyrighted software that is distributed at no cost for a trial period and after the trial period you must send payment to the program developer?
A) shareware
B) open source software
C) public-domain software
D) freeware

Competency: Defining System and Business Requirements

MANAGEMENT INFORMATION SYSTEMS SAMPLE CASE STUDY

PARTICIPANT INSTRUCTIONS
1. You have 20 minutes to review the case presentation.
2. Presentation time is seven minutes. At six minutes, the timekeeper will stand and hold up a colored card indicating one minute is left and seven minutes the timekeeper will hold up a colored card when time is up.
3. Each team member will be given two note cards. The note cards will be collected upon completion of the presentation.
4. You are the owner (Sam) of Sam's Home Entertainment Systems, Inc. and have been asked by a XYZ Software Company (judges) to come up with a plan for the company.
5. The judges will interact and ask questions throughout the presentation, as they assume the roles of senior management.
6. All members of the team must participate in the presentation, as well as answer the questions.

PERFORMANCE INDICATORS
- A complete solution is described with positive and negative aspects of its implementation given
- Statements are well organized and clearly stated; appropriate business language is used
- Anticipates results based on a comprehensive solution and market conditions
- Possesses good systems analysis and design decision-making and problem-solving skills
- Demonstrates ability to effectively answer questions

CASE STUDY SITUATION
Sam is the owner of a Sam's Home Entertainment Systems, Inc. and has been asked to be a consultant by a major software company that is developing a complete solution to the average homeowner who has limited technical skill and networking knowledge. What problems must be addressed so that a technical solution can be developed that connects all of the devices and is easy to use so that most people are able to purchase it and install it themselves.

Given the expectations of a modern family that already owns many different types of devices and units that connect to a potential number of signal sources provided by competing companies, what are the latest developments with the best features that should be part of a solution?

Specifically, Sam has been asked to analyze not only the list of entertainment devices and types that are available to the homeowner now and what challenges currently exist and will be part of the near future. The analysis should include:

1. List of all of the devices that are available for the homeowner (homes or apartments) and how they operate (stand alone or connected to another source).

2. Determine whether the home entertainment market is one that is likely to want a single solution.

3. What type of connectivity is needed within the home and what will be necessary outside of the dwelling that will be required to increase the likelihood of success for this new solution?

4. How might this solution be marketed and can it be patented so that there will be a competitive advantage for the company that develops this solution?

After introductions, you should begin providing feedback and information to Sam (judge) as to how you recommend they deal with the current situation. The list above does not have to be all-encompassing. Feel free to add other ideas.

Each member of your presentation team should provide some feedback and information regarding the problem.