Management Information Systems



Management Information Systems provides members with the opportunity to gain knowledge around outlining a small business' environment and needs. This competitive event consists of an objective test and a role play scenario.

Event Overview

Division: High School

Event Type: Team of 1, 2 or 3 members

Event Category: Role Play Event

Event Elements: Objective Test and Role Play

Objective Test Time: 50 minutes

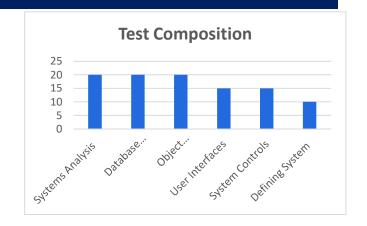
Role Play Time: 20-minute preparation time, 7-minute presentation time

NACE Connections: Career & Self-Development, Communication, Leadership, Professionalism,

Teamwork

Objective Test & Role Play Competencies

- Systems Analysis & Design (Systems Development Life Cycle)
- Database Management and Modeling Concepts
- Object Oriented Analysis and Design
- User Interfaces
- System Controls
- Defining System and Business Requirements



Region

Each chapter may enter two teams in this event. Testing is school-site and proctored with careful monitoring to ensure the integrity of the test. This event is classified as a Performance Event even though it is test only at the regional level.

State

Top three (3) qualifiers of each region are eligible to compete at the State Leadership Conference. Competitors will take the objective test to determine top ten (10) finalists. Finalists will be announced at the opening session and will present to judges on Saturday of the SLC.

National

Required Competition Items

	Items Competitor Must Provide	Items FBLA Provides
Objective Test	Sharpened pencil	 One piece of scratch
		paper per competitor



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	 Fully powered <u>device for online</u> <u>testing</u> Conference-provided nametag <u>Photo identification</u> Attire that meets the <u>FBLA Dress Code</u> 	Internet accessTest login information (link & password)
	Items Competitor Must Provide	Items FBLA Provides
Role Play	 Conference-provided nametag Photo identification Attire that meets the FBLA Dress Code 	 Two notecards per competitor Pencil Secret role play problem/scenario Flip chart paper/markers

Important FBLA Documents

Competitors should be familiar with the Competitive Events <u>Policy & Procedures Manual</u>, <u>Honor Code</u>, <u>Code of Conduct</u>, and <u>Dress Code</u>.

Eligibility

- FBLA membership dues are paid by 11:59 pm Eastern Time on March 1 of the current school year or prior to regional competition, whichever comes first.
- Members may compete in an event at the National Leadership Conference (NLC) more than
 once if they have not previously placed in the top 10 of that event at the NLC. If a member
 places in the top 10 of an event at the NLC, they are no longer eligible to compete in that event.
- Members must be registered for the RLC/SLC/NLC and pay the conference registration fee to participate in competitive events.
- Members must stay in an official FBLA hotel block to compete.
- Each chapter may submit two entries; each region may submit three entries; each state may submit four entries.
- Each competitor can only compete in one individual/team event and one chapter event (American Enterprise Project, Community Service Project, Local Chapter Annual Business Report, Partnership with Business Project) at the national level. RLC/SLC competitors may compete in one objective test/one performance event/ and one chapter event.
- Each competitor must compete in all parts of an event for award eligibility.
- All members of a team must consist of individuals from the same chapter.
- Competitors cannot be replaced or substituted in between the objective test and role play time.
 Only those competitors that test and score in the top 15 teams will be allowed to participate in the role play round.
- Picture identification (physical or digital: driver's license, passport, state-issued identification, or school-issued identification) matching the conference nametag is required when checking in for competitive events.
- If competitors are late for their assigned objective test and/or role play time, they will be allowed to compete with a five-point penalty until such time that results are finalized, or the accommodation would impact the fairness and integrity of the event.



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 Some competitive events start before the Opening Session of SLC/NLC. The schedules for competitive events are displayed in the local time of the NLC location. Competitive event schedules cannot be changed.

Recognition

• The number of competitors will determine the number of winners. The maximum number of winners for each competitive event is 10/NLC; 5/SLC; 3/RLC.

Event Administration

- This event is two rounds: objective test and role play
- Objective Test
 - Objective Test Time: 50 minutes
 - Objective Test Questions: 100 questions
 - o This event is an objective test administered online at the RLC/SLC/NLC.
 - o No reference or study materials may be brought to the testing site.
 - All electronic devices such as cell phones and smart watches must be turned off before competition begins.
 - Competitors on a team must test individually, starting within minutes of each other.
 Individual test scores will be averaged for a team score.
- Interactive Role Play Presentation (SLC/NLC only)
 - o Preparation Time: 20 minutes (one-minute warning)
 - Presentation Time: 7 minutes (one-minute warning)
 - Question & Answer: None
 - The top 10 (SLC) 15 (NLC) scoring teams will advance to the role play final round.
 - The role play will be a problem or scenario that includes a decision-making problem outlining a small business' environment and needs. The role play will be given to the competitors at the beginning of their assigned preparation time.
 - Two notecards will be provided to each competitor. If the entry is a team, each competitor on the team will receive two notecards. These notecards may be used during event preparation and role play presentation. Information may be written on both sides of the notecards. Notecards will be collected following the role play.
 - o No additional reference materials or props or visuals are allowed.
 - Teamwork: If participating as a team, all team members are expected to actively participate in the role play.
 - Role plays are interactive presentations; the judges may ask questions throughout the presentation.
 - o Role play presentations are not open to conference attendees.
 - Competition ethics demand that competitors do not discuss or reveal the role play until the event has ended.

Scoring

 The team-averaged objective test score determines the top 10 (SLC) top 15 (NLC) teams advancing to role play round.



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- The role play round scores only will be used to determine winners.
- Objective test scores will be used to break a tie.
- All announced results are final upon the conclusion of the RLC/SLC/NLC.

Recording of Presentations

- No unauthorized audio or video recording devices will be allowed in any competitive event.
- Competitors in the event should be aware FBLA reserves the right to record any presentation for use in study or training materials.

Americans with Disabilities Act (ADA)

 FBLA meets the criteria specified in the Americans with Disabilities Act for all competitors with accommodations submitted through the conference registration system by the registration deadline.

Penalty Points

- Competitors may be disqualified if they violate the Code of Conduct or the Honor Code.
- Five points are deducted if competitors do not follow the Dress Code or are late to the assigned testing or presentation/role play time.

Electronic Devices

 Unless a pre-approved accommodation is in place, all cell phones, smart watches, and headphones must be turned off and put away before competition begins. Any visibility of these devices will be considered a violation of the Honor Code.

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Study Guide: Test Competencies and Tasks

- A. Systems Analysis & Design (Systems Development Life Cycle)
 - 1. Demonstrate knowledge of the key functions and subsystems of the network system.
 - 2. Demonstrate knowledge of the system life-cycle approach and identify and explain the steps in the system's development life cycle.
 - 3. Identify the functions of systems analysts.
 - 4. Select basic fact-gathering techniques to be used and conduct a preliminary investigation.
 - 5. Record facts gathered through the system investigation.
 - 6. Define the scope of the systems project.
 - 7. Identify time, technology, and resource constraints.
 - 8. Perform appropriate diagnostic tests.
 - 9. Investigate system alerts.
 - 10. Design system output, system input, files, and processing.
 - 11. Analyze the interaction of the operating system and hardware architecture.
 - 12. Justify the communications selections for the system (e.g., single PCs, LANS, and/or WANS).
 - 13. Identify the system components and their relationships.
 - 14. Specify the workflow system.
 - 15. Develop programming specifications and program the system.
 - 16. Test and document the system.
 - 17. Design a framework for evaluating information system function and individual applications.
 - 18. Compare the capabilities of an application with the requirements it is intended to meet.
 - 19. Identify alternative outcomes of the application verification process.
 - 20. Evaluate processes and outcomes including the results and probabilities of errors.
 - 21. Modify inputs, outputs, and processing to refine an application.
 - 22. Determine needed follow-up actions including recommendations for new features or enhancements to existing tools.
- B. Database Management and Modeling Concepts
 - 1. Demonstrate knowledge of the features, functions, and architecture of a database management system.
 - 2. Identify the uses of a DBMS in business organizations.
 - 3. Demonstrate knowledge of how a DBMS ensures data integrity through transaction-control techniques.
 - 4. Trace the evolution of DBMS models and their implementation.
 - 5. Produce single- and multiple-level control break reports and subtotal and final totals.
 - 6. Write programs that allow the user to make a menu choice, that require statements to be executed multiple times, and that access multiple files.
 - 7. Design an information system within a database environment.
 - 8. Build database applications and distribute data across a distributed DBMS.
 - 9. Analyze/model organizations using Entity-Relationship and Object technologies.
 - Create/update and query a relational database using Structured Query Language.
 - 11. Manage and monitor implementation of a database management system.
 - 12. Identify and document problems and propose solutions that are congruent with application requirements.



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- 13. Apply databases to actual situations and business problems.
- 14. Create conceptual data models.
- 15. Identify and select logical and physical structures appropriate for specific applications.
- 16. Create and normalize a logical data model in accordance with established company policy.
- 17. Plan, develop and normalize a database schema.
- 18. Explain the options for converting legacy records to electronic database management systems.

C. Object Oriented Analysis and Design

- 1. Identify and define object-oriented programming terminology.
- 2. Describe the fundamental object-oriented principles and identify the characteristics and uses of object-oriented processing.
- 3. Describe the object-oriented software development process.
- 4. Explain the purpose, activities, and artifacts of the following Object-Oriented Software Development workflows: requirements gathering, requirements analysis, architecture, design, implementation, testing, and deployment.
- 5. Choose an object-oriented methodology that best suits the project.
- 6. Create a project vision document from the results of interviews and risk analysis.
- 7. Document the system in the System Requirements Specifications.
- 8. Create and refine the diagram for a software system based on the System Requirements Specifications.
- 9. Identify the key abstractions based on the analysis.
- 10. Describe the Analysis Model, the Architecture Model and the Component (Design) Model.
- 11. Construct the problem domain model.
- 12. Create the Analysis Model using Robustness analysis.
- 13. Distinguish between architecture and design.
- 14. Create the Architecture workflow artifacts.
- 15. Create an architecture model for presentation.
- 16. Create a solution model for GUI and Web UI application.
- 17. Refine the attributes, relationships, and methods of the Domain model.
- 18. Apply design patterns (e.g., composite, strategy, observer, and abstract factory) to the Solution Model.
- 19. Model complex object state using state chart diagrams.

D. User Interfaces

- 1. Define hardware-software interface issues for a system.
- 2. Describe interface techniques and standards.
- 3. Demonstrate knowledge of version management and interface control.
- 4. Assess the impact of changes that affect interfaces.
- 5. Integrate human factors and user interfaces in visual design.
- 6. Develop user interfaces.
- 7. Develop programs that interface with a data store.
- 8. Understand the characteristics of potential users, their tasks, and their environments.
- 9. Relate to the ways in which the users define themselves and their roles (e.g., jobs, tasks, and tools they use).
- 10. Conduct tasks analysis to review the workflow and other aspects of the user's job.
- 11. Interpret the results of tasks analysis.
- 12. Select techniques that are appropriate to a project and the user's environment.



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- 13. Analyze and document data by creating representations such as workflows, task hierarchies, and task scenarios.
- 14. Reorganize results using such techniques as affinity diagrams and insight sheets to clarify relationships.
- 15. Form the design using storyboarding, sketching, and video presentations.
- 16. Test and document user interface usability.

E. System Controls

- 1. Set up/maintain user accounts on multiple systems.
- 2. Provide technical product support and facilitate the delivery of technical services.
- 3. Manage inventory and assets.
- 4. Participate in evaluation of the total system.
- 5. Identify new application requirements within the system.
- 6. Document presentation problems.
- 7. Analyze historical data to identify trends.
- 8. Formulate technical procedures.
- 9. Prepare documentation manuals.
- 10. Prepare required reports.
- 11. Apply data structure concepts to the storage and retrieval of data (e.g., map a model, create, and enter records and logical files).
- 12. Query a database and create reports and/or files from queries.
- 13. Transfer files between mid-range and microcomputer systems.
- 14. Implement hardware and software network security solutions (e.g., VPN, SSL, and firewall).
- 15. Maintain technical industry knowledge.

F. Defining System and Business Requirements

- 1. Identify information technology needed to support given sets of tasks and activities for individuals, workgroups, and the organization.
- 2. Define the role of Information Systems within strategic plan for the total company.
- 3. Develop a short-range Information System plan and a continuous improvement plan.
- 4. Determine functional structures (internal vs. outsourcing).
- 5. Establish goals and objectives for an Information System.
- 6. Define mission and critical success factors.
- 7. Formulate Information System operating procedures.
- 8. Identify hierarchical and flow models of the organization.
- 9. Define the roles and function of Information System personnel within the organization.
- 10. Identify drivers and inhibitors of information technology change in the organization.
- 11. Describe how information technology affects worker-management relationships.
- 12. Explain how information technology has contributed to worker productivity and teamwork.



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Management Information Systems Role Play Presentation Rating Sheet Exceeds Po						
Expectation Item	Not Demonstrated	Below Expectations	Meets Expectations	Expectations	Earne	
Demonstrates understanding of the role play and defines problem(s) to be solved	No description or role play synopsis provided; no problems defined	Describes and provides role play synopsis OR defines the problem(s)	Describes and provides role play synopsis AND defines the problem(s)	Demonstrates expertise of role play synopsis AND definition of the problem(s)		
	0 points	1-8 points	9-12 points	13-15 points		
Identifies alternatives and the pro(s) and con(s) of each	No alternatives identified	Alternative(s) given but pro(s) and/or con(s) are not analyzed	At least two alternatives given, and pro(s) and con(s) are analyzed	Multiple alternatives given and multiple pros and cons analyzed for each		
	0 points	1-9 points	10-16 points	17-20 points		
Identifies logical solution and aspects of implementation	No solution identified	Solution provided, but implementation plan not developed	Logical solution and implementation plan provided and developed	Feasible solution and implementation plan developed, and necessary resources identified		
	0 points	1-9 points	10-16 points	17-20 points		
Demonstrates knowledge and understanding of the event competencies: Business size and scope / systems analysis and design / object-oriented analysis and design / user interfaces / system controls / defining systems	No competencies demonstrated	One or two competencies are demonstrated	Three competencies are demonstrated	Four or more competencies are demonstrated		
	0 points	1-9 points	10-16 points	17-20 points		
Presentation Delivery						
Statements are well-organized and clearly stated	Competitor(s) did not appear prepared	Competitor(s) were prepared, but flow was not logical	Presentation flowed in logical sequence	Presentation flowed in a logical sequence; statements were well organized		
	0 points	1-6 points	7-8 points	9-10 points		
Demonstrates self-confidence, poise, assertiveness, and good voice projection	Competitor(s) did not demonstrate self- confidence	Competitor(s) demonstrated self- confidence and poise	Competitor(s) demonstrated self- confidence, poise, and good voice projection	Competitor(s) demonstrated self- confidence, poise, good voice projection, and assertiveness		
	0 points	1-2 points	3-4 points	5 points		
Demonstrates the ability to effectively answer questions	Unable to answer questions	Does not completely answer questions	Completely answers questions	Interacted with the judges in the process of completely answering questions		
	0 points	1-6 points	7-8 points	9-10 points		
	Staff Only: Pe	nalty Points (5 points for dr	ess code penalty and/or 5 poi	nts for late arrival penalty)		
			Prese	entation Total (100 points)		
Name(s):						
Name(s): School:						

Comments:



