

# Course: Software Technologies and Enterprise Architecture



**WEEK 16: Final Exam (Week 9-14)**

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# Exam Descriptions and Instructions

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This final examination constitutes 50% of the total course grade and consists of four sections:

**Part I:** True or False Questions (**5 marks**)

**Part II:** Multiple-Choice Questions (**30 marks**)

**Part III:** Short-Answer Questions (**10 marks**)

**Part IV:** Essay Questions (**5 marks**)

## General Instructions

1. Students must answer **all questions**. No question should be left unanswered.
  2. Answers must be written in the spaces provided on the examination paper.
  3. The maximum time allowed for this examination is 2 hours.
- Accordingly, students will receive a final grade based on the combined results of the midterm and final examinations, totaling 100%. Therefore, students are encouraged to review all course materials thoroughly and prepare well for the examination.

**Good Luck!**

# Part I: True or False Questions (5pts)

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1. Multi-cloud strategies reduce flexibility.

**Answer:** \_\_\_\_\_

2. Cloud management tools can help manage multiple cloud environments from a single interface.

**Answer:** \_\_\_\_\_

3. Technology Architecture is only useful for IT departments.

**Answer:** \_\_\_\_\_

4. Enterprise Architecture tools help create a single source of truth.

**Answer:** \_\_\_\_\_

5. Traditional EA tools are generally easier for non-technical users than modern business-focused platforms.

**Answer:** \_\_\_\_\_

## Part II: Multiple Choice Questions (30pts)

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\_\_\_\_\_ 1. What is Business Architecture?

- A. The practice of analyzing, designing, planning, and communicating an organization's business capabilities and processes
- B. The design of an organization's IT infrastructure
- C. A framework for software development
- D. A network security model

\_\_\_\_\_ 2. A manufacturing company discovers that multiple departments perform similar tasks using different processes, causing delays and increased costs. Which Business Architecture benefit would most directly address this problem?

- A. Improved Governance
- B. Strategic Alignment
- C. Enhanced Operational Efficiency
- D. Security Management

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_\_\_ 3. Which of the following is NOT a foundation of CRM?

- A. Vision
- B. Strategy
- C. Customer Experience
- D. Manufacturing Process

\_\_\_\_\_ 4. Which CRM software is best known for its extensive AI capabilities and AppExchange ecosystem?

- A. Salesforce Sales Cloud
- B. Zoho CRM
- C. Pipedrive
- D. HubSpot CRM

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_\_\_ 5. What is the primary purpose of Enterprise Architecture (EA) Governance?

- A. To increase software development speed only
- B. To align technology, systems, and business strategies with organizational goals
- C. To eliminate all organizational risks
- D. To replace IT governance

\_\_\_\_\_ 6. A company discovers that multiple departments are purchasing similar software tools, causing unnecessary expenses. Which EA Governance principle can best address this issue?

- A. Stakeholder Engagement
- B. Continuous Improvement
- C. Flexibility and Agility
- D. Standardization and Consistency

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_\_ 7. Which framework is most widely adopted for Enterprise Architecture Governance?

- A. ITIL
- B. COBIT
- C. TOGAF
- D. Scrum

\_\_\_\_ 8. Which artifact describes the future technology design and desired capabilities?

- A. Target-State Architecture Model
- B. Current-State Architecture Model
- C. Technology Standards Catalogue
- D. Software Distribution Diagram

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_9. A growing e-commerce company is experiencing system inconsistencies because different departments independently purchase technology solutions. Which benefit of Technology Architecture would help solve this issue?

- A. Increased Complexity
- B. Strategic Alignment
- C. Data Duplication
- D. Vendor Lock-in

\_\_\_\_\_10. A company undergoing digital transformation needs a future-ready technology landscape. What should it create first?

- A. Target-State Architecture Model
- B. Database Backup Plan
- C. Employee Handbook
- D. Marketing Strategy

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_\_\_ 11. Which of the following is NOT a component of EA Governance?

- A. Policies and Standards
- B. Compliance Checks
- C. Marketing Strategies
- D. Change Management

\_\_\_\_\_ 12. A healthcare organization must integrate electronic health records while maintaining regulatory compliance. Which tool is highlighted for healthcare use?

- A. QualiWare ApS
- B. Sparx Systems
- C. Bee360
- D. Planview

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_\_ 13. Which security model follows the principle "Trust No One, Verify Everything"?

- A. Firewall Security
- B. Perimeter Security
- C. Zero Trust Security
- D. Network Segmentation

\_\_\_\_ 14. An organization wants to rapidly add and remove business capabilities through reusable modules connected by APIs. Which architecture trend supports this goal?

- A. Data Fabric
- B. Composable Architecture
- C. Edge Computing
- D. Green IT

# Cont. ...Part II: Multiple Choice Questions

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\_\_\_\_\_ 15. Which of the following is a traditional modeling and diagramming tool characteristic?

- A. AI-driven analytics
- B. Repository-centric modeling
- C. Cloud-native SaaS platform
- D. Real-time business dashboards

\_\_\_\_\_ 16. What is the primary purpose of an Enterprise Architecture (EA) tool?

- A. To develop programming languages
- B. To manage cloud storage only
- C. To replace databases
- D. To support and facilitate Enterprise Architecture practices

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_17. Which modeling language is commonly supported by traditional EA tools?

- A. HTML
- B. SQL
- C. UML
- D. CSS

\_\_\_18. Which metric is commonly used to measure User Experience (UX)?

- A. Revenue Growth
- B. Customer Satisfaction Rate
- C. Time on Task
- D. Profit Margin

# Cont. ... Part II: Multiple Choice Questions

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\_\_\_\_\_ 19. Which factor should be considered when selecting an EA tool?

- A. Ease of use
- B. Scalability
- C. Integration capability
- D. All of the above

\_\_\_\_\_ 20. A manufacturing company uses AI to predict equipment failures before they occur. Which benefit of AI-Driven Enterprise Architecture is demonstrated?

- A. Continuous Monitoring
- B. Predictive Analytics
- C. Micro-Segmentation
- D. Circular Economy

# Part III: Short Answer Questions(10pts)

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1. What is a Data Fabric? (2pts)

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2. Explain how AI improves modern Data Architecture.(2pts)

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3. Define Technology Architecture(2pts).

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# Cont. ...Part III: Short Answer Questions

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4. Analyze how Technology Architecture supports digital transformation(2pts).

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5. Recommend a Technology Architecture approach for a rapidly growing fintech company and justify your recommendation(2pts).

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# Part IV : Essay Questions (5pts)

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1. Discuss at least four benefits of Enterprise Architecture tools in modern organizations.(3pts)

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2. Explain at least four Technology Architecture development process. (2pts)

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