Course: Software Requirements Engineering

Week 16: Final Exam – Answer Keys

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June, 2026

Answer Keys

Part I: Multiple Choice ➔ 60%

Part II: Short Answer ➔ 15%

Part III: Case Analysis ➔ 25%

Total ➔ 100%

Multiple Choice – Answer Keys

Q. No.	Answer	Q. No.	Answer	Q. No.	Answer
1	**B**	11	**B**	21	**A**
2	**C**	12	**A**	22	**B**
3	**C**	13	**A**	23	**B**
4	**C**	14	**A**	24	**B**
5	**B**	15	**B**	25	**B**
6	**C**	16	**A**	26	**A**
7	**B**	17	**B**	27	**B**
8	**B**	18	**A**	28	**B**
9	**C**	19	**A**	29	**B**
10	**B**	20	**B**	30	**B**

Short Answer – Answer Keys (1-2/5)

1. Software Requirements Engineering is the systematic process of eliciting, analyzing, documenting, validating, managing, and maintaining software requirements to ensure stakeholder needs are accurately understood and implemented.

2. **Functional Requirement:** Describes what the system should do.
   Example: *The system shall generate monthly reports.*

   Non-functional Requirement: Describes quality attributes or constraints.
   Example: *The system shall respond within 2 seconds.*

Short Answer – Answer Keys (3-5/5)

3. Examples:
   Interview – direct stakeholder questioning
   Observation – observing actual work processes
   Questionnaire/Survey – collecting responses from many stakeholders
   Workshop/Brainstorming – collaborative requirement generation
   Prototyping – early system model for feedback
4. Stakeholder identification ensures all relevant users and affected parties are included, reducing missed requirements, conflicts, and misunderstandings.
5. The SRS formally documents system requirements and serves as a reference for design, development, testing, and stakeholder agreement.

Case Analysis – Answer Keys (1/3)

1(a) Identify five stakeholders.

Possible Answers

- Patients, Doctors, Nurses, Hospital management, Reception staff
- Pharmacists, IT administrators

1(b) Write three functional requirements.

Possible Answers

- The system shall allow patient registration.
- The system shall schedule appointments.
- The system shall generate bills.
- The system shall maintain electronic medical records.

1(c) Write two non-functional requirements.

Possible Answers

- System shall ensure secure patient data encryption.
- System shall respond within 2 seconds.
- System availability shall be 99.9%.

Case Analysis – Answer Keys (2/3)

2(a) Identify requirement conflict.

Expected Answer
Conflict between:

- Customer need for convenience and fast login
- Security requirement for multi-factor authentication

2(b) Suggest negotiation approach.)

Expected Answer
Balance usability and security, e.g., biometric login plus MFA for high-risk transactions.

2(c) Prioritize using MoSCoW.

Example

Must Have

- Secure authentication, Money transfer

Should Have

- Biometric login

Could Have

- Personalized dashboard

Won't Have (Current Release)

- Cryptocurrency integration

Case Analysis – Answer Keys (3(a, b)/3)

3(a) Write three user stories.

Sample Answers

1. *As a customer, I want to search products so that I can find items quickly.*
2. *As a customer, I want secure payment so that I can shop safely.*
3. *As an admin, I want to manage inventory so that products remain updated.*

3(b) Prepare a simple product backlog.

Possible Items

1. User registration
2. Product search
3. Shopping cart
4. Payment integration
5. Order tracking

Case Analysis – Answer Keys (3(c)/3)

3(c) Explain sprint feedback handling.

Expected Answer

Stakeholder feedback is collected during sprint reviews, prioritized in the product backlog, and incorporated into future sprints.

The End!