

## **Chapter 6: Controlled Middle: Requirements Analysis and Design Definition**

1. C. Requirements analysis tools and techniques are used to develop the stakeholder and solution requirements.
2. A. Requirements validation ensures that all requirements support the delivery of value to the business by ensuring that stakeholder, solution, and transition requirements align to the business requirements.
3. B. Consistent requirements do not contradict or conflict with one another.
4. D. Data flow diagrams show how information flows through the system.
5. D. A model serves as an abstraction representing some or all of the proposed solution.
6. C. A process is defined as a sequence of repeatable activities executed in an organization.
7. B. Decision modelling is an example of rationale-focused models used in requirements analysis.
8. C. Entities in an entity-relationship diagram are the things about which data is needed. They are contained in the labeled rectangle of the diagram.
9. A. The six tasks of requirements analysis are specify and model requirements, verify requirements, validate requirements, define requirements architecture, define design options, and analyze potential value and recommend solution.
10. B. Activity flow models show how the system behaves over the course of time through executing business processes or resulting from events that occur inside the solution scope.
11. C. The requirements architecture is the structure for all of the requirements of a proposed change.
12. B. Constraints impose limitations imposed on the solution that do not support the business or stakeholder needs.

3. D. Improvement opportunities include increasing efficiency, providing better access to information, and identifying capabilities beyond what is required.
4. B. Nonfunctional requirements define quality attributes, design, and implementation constraints, and external interfaces the product must have. They are a type of solution requirement.
5. D. Atomic requirements are self-contained and capable of being understood independently of other requirements or designs.
6. C. Scope modelling organizes requirements based on the solution components to which they are related.
7. A. Specified and modelled requirements are the output from the task “specify and model requirements.”
8. C. The four main components of an entity relationship diagram are the entities, their attributes, unique identifiers for each occurrence of an entity, and relationships between the entities. Attributes are individual pieces of information that describe an entity.
9. A. Verification is a quality check performed after a requirement is analyzed. Verification activities are typically performed iteratively throughout the requirements analysis process.
10. B. Assumptions and constraints are defined and clarified as requirements are understood and documented with their associated attributes such as date identified, owner, impact, and any associated risks.