SAMPLE EXAM QUESTIONS (v3.8)

This sample exam contains **45** questions.

Question 1

Which is **not** a main reason for documenting requirements? (1 point)

A) Requirements are the basis of system development.
B) Requirements can make use of templates.
C) Requirements have a legal relevance.
D) Requirements must be accessible to all involved parties.

Question 2

Which of the following statements best characterizes the relationship between a requirements engineer and a stakeholder in the role of someone who places orders to suppliers? (1 point)

A) The requirements engineer provides input for the work of the stakeholder
B) The results of the requirements engineer are being managed by the stakeholder
C) The stakeholder provides input for the work of the requirements engineer
D) The stakeholder monitors the work of the requirements engineer
E) The work of the requirements engineer is not related to the mentioned role of the stakeholder

Question 3

When the same task (e.g. creation of a business process model) is given to different requirements engineers the result can be significantly different. Which of the following reasons describe possible causes of that? (2 points)

	True	False
The requirements engineers have different perceptions	❒	❒
The requirements engineers talked to different stakeholders	❒	❒
The requirements engineers have different educational backgrounds	❒	❒
The requirements engineers have different experiences and backgrounds	❒	❒

Question 4

Indicate which of the following statements about the main purpose of a context diagram are true and which are false: (2 points)

A context diagram is used ….

	True	False
... to identify system boundaries	❒	❒
... to test the requirements from the point of view of consistency and clarity	❒	❒
... to identify all stakeholders of the system	❒	❒
... to illustrate the sequencing of the exchange between the system and its context	❒	❒

Question 5

A stakeholder of a system is a person or an organization that has … (1 point)

A) accepted the goals and scope of the system.
B) an influence on the requirements of the system.
C) understood the requirements that need to be implemented.
D) wishes that need to be considered in the requirement specification.

Question 6

Consider these two propositions: (2 points)

I When defining the system boundary, a decision has to be made: Which aspects pertain to the system context and which aspects are part of the irrelevant environment?

II When defining the context boundary, the question to be answered is: Which aspects pertain to the system to be developed and which aspects belong in the system context?

A) I is true, II is false
B) I is false, II is true
C) Both propositions are true
D) Both propositions are false

Question 7

Which aspect of a context boundary is **false**?

(1 point)

A) A complete and precise definition of the context boundary for complex systems is virtually impossible.
B) Requirement sources can be aspects of the environment that need to be considered in the Requirements Engineering process.
C) The gray zone comprises identified aspects of the system for which it is unclear whether they have a relation to the purpose statement or not.
D) The irrelevant part of a system does not have impact on the requirements of the system.

Question 8

In order to document the system and context boundaries, what diagram can be used?

(1 point)

A) Activity diagram with event-driven process chains
B) Data flow diagrams with sources and sinks
C) Goal model with “AND” decomposition
D) State diagram with trace graph

Question 9

With respect to the stakeholders, which combination of information is most suitable for the documentation of the requirements sources?

(2 points)

A) Knowledge area, relevance, temporal and spatial availability, name
B) Priority, role, name, extend of expertise
C) Relevance, length of service, temporal and spatial availability, extend of expertise
D) Role, relevance, supervisor, contact information

Question 10

You are working on a project involving a control system for elevators. Which of the following UML 2.0 diagram type is the most suitable in this context for depicting behavioural requirements?

(1 point)

A) Activity diagram
B) Deployment diagram
C) Class diagram
D) State diagram

Question 11

Professor Kano makes statements about changes in features over time. Which statements are true and which are false? (2 points)		
	True	**False**
Basic factors become performance factors	❒	❒
Performance factors become excitement factors	❒	❒
Excitement factors become performance factors	❒	❒
Performance factors become basic factors	❒	❒

Question 12

Indicate for each item of information whether it is mandatory for it to be visible in a context diagram? (2 points)		
	Yes	**No**
System name	❒	❒
Neighbouring technical systems	❒	❒
System functions	❒	❒
Logical outputs	❒	❒
System parameters	❒	❒

Question 13

A context diagram shows: (1 point)

A) The involved software components
B) The necessary dialogs between the applications
C) The interfaces between the system and its environment
D) The needed system capacity
E) The project effort

Question 14

In requirements engineering, requirements can be looked at through different views. Which of the following reasons for the need of different views is true or false? (2 points)		
	True	**False**
To ensure that the requirements are atomic in nature	❒	❒
To present stakeholders with their own requirements for review	❒	❒
To detect relationships between requirements more efficiently	❒	❒
To obtain a better overview during processing / editing	❒	❒

Question 15

Choose the **two** most suitable techniques when eliciting requirements for a safety critical system where usability and time to market have highest attention. (2 points)

A) Brainstorming
B) Field observation
C) Interview
D) Perspective based reading
E) System archaeology

Question 16

The Kano model states that basic requirements are difficult to find. Which technique is best suited for eliciting **basic** requirements? (1 point)

A) Interview
B) Questionnaire
C) Observation of actual work
D) Low-fidelity prototyping
E) Brainstorming

Question 17

Which of the following elicitation techniques is best suited if the stakeholders are unable to express their knowledge?

(1 point)

A) Change of perspectives
B) Field observation
C) Interview
D) Questionnaire with multiple choice questions

Question 18

Choose the **two** most suitable interview questions for the requirements engineer who is working on a system which makes the schedules for a flower delivery service in a large urban area.

(1 point)

A) What are the maximum quantities?
B) When is the system planned to go into production?
C) Which database would be efficient enough?
D) Will a penalty be charged if the flowers are delivered too late?

Question 19

Which style rules apply to writing requirements in natural language which contribute to readability?

(2 points)

		True	False
A)	Ambiguous	❒	❒
B)	Contradistinctive	❒	❒
C)	Elementary	❒	❒
D)	Only one process verb	❒	❒
E)	Short sentences	❒	❒
F)	Traceable	❒	❒
G)	Using active voice	❒	❒
H)	Using UML diagram	❒	❒

Question 20

Which **two** of the following advantages apply to requirement templates?

(1 point)

A) Enable common accessibility
B) Enable unique identification
C) Minimize ambiguities
D) Provide semantics
E) Provide syntactic structure

Question 21

Which **two** arguments would a Project Manager give for using Requirements Templates?

(1 point)

A) Requirements meet all the quality criteria.
B) Templates can be learned in a short time.
C) Templates guarantee high quality requirements.
D) Templates provide an approach to reduce language effects.
E) Templates provide more continuity of the business.

Question 22

For functional requirements, documented using natural language, requirement templates can help by classifying system activities into types. What are **two** relevant system activity types? (2 points)

A) Interface requirement
B) Legal obligation
C) Quality requirement
D) Technical requirement
E) The system performs the process autonomously

Question 23

What are **three** typical characteristics for documenting requirements in natural language? (2 points)

A) are mainly for structural perspective.
B) can be universally applied to document any circumstance.
C) cannot lead to misunderstanding in practice.
D) good readability of requirements.
E) is not suitable for quality requirements.
F) no prior knowledge is necessary regarding the notation.

Question 24

Which **two** diagrams are used as requirements models of the functional perspective? (1 point)

A) Activity Diagrams
B) Data Flow Diagrams
C) Entity-Relationship Diagrams
D) State Diagrams
E) Class Diagrams

Question 25

A use-case diagram does **not** show: (1 point)

A) The rules for using an application
B) The actors of an application
C) The use cases of an application
D) The boundary between an application and its environment
E) The functionality of an application

Question 26

Are the mentioned words frequently used elements of a UML Class Diagram? (1 point)

		True	False
A)	Composition	❒	❒
B)	Generalization	❒	❒
C)	Interaction	❒	❒
D)	Roles	❒	❒
E)	Sources	❒	❒

Question 27

Which **two** of the following phrases define the term "Requirements" according to the IEEE standard? (2 points)

A) The difference between the current and the target situation
B) A procedure for fulfilling a requirement
C) A capability needed by a user to achieve an objective
D) A problem that has been identified
E) A wish that has been expressed by a stakeholder
F) A condition that must be met by a system

Question 28

Which **three** aspects must first be considered when choosing suitable requirements gathering techniques? (3 points)

A) Availability of the stakeholders
B) Age of the people involved
C) Available means of communication
D) Project deadlines and budget
E) Use of tools
F) Domain in which the system is to be used

Question 29

Which **two** arguments represent a good reason for the use of questionnaires when gathering requirements: (2 points)

A) Large number of participants is possible
B) Statistically relevant statements about requirements are possible
C) Gives information about the participants' understanding
D) Often indicates level of enthusiasm

Question 30

Which statements are true for sources of requirements and which are false? (2 points)

Sources of requirements...

	True	False
... can be found only within the enterprise	❒	❒
... are exclusively the stakeholders	❒	❒
... may be other IT systems	❒	❒
... may be standards and norms	❒	❒

Question 31

An enterprise produces parts for the automobile industry. The executive board has decided that the firm's product catalogue shall be available on the Web, allowing direct electronic ordering via the internet. An important large customer was pushing the idea.

The firm has accordingly launched a development project. A proposed version of the requirements specification has just been released, and the project leader decides to have the specification reviewed in a walkthrough. As experts she names four co-workers from the testing department, who did not participate in the production of the specification.

Evaluate the decisions and choices of the project leader by marking each of them as suitable or unsuitable. (2 points)

		suitable	unsuitable
A	The moment for the review is well chosen.	❒	❒
B	A document review is a suitable testing procedure for the current situation	❒	❒
C	In addition to the document review, she plans to construct and test a user-interface prototype.	❒	❒
D	Her decision not to include representatives of the large customer for the review makes sense at this point in the project.	❒	❒
E	Her choice of experts (four testers who did not participate in the creation of the requirements specification and nobody else) is well taken.	❒	❒

Question 32

Additional information to requirements is managed with the help of attributes. One example for additional information is a unique identification. Which of the following phrases about the aim of a unique identification are true, which are false?

(2 points)

	A unique identification…	True	False
A	helps in estimating of the total size of the specification.	❒	❒
B	provides an unambiguous basis for communication.	❒	❒
C	Allows references to other requirements.	❒	❒
D	supports traceability to other development artifacts.	❒	❒

Question 33

Which **one** of the following is a symptom of inadequate requirements engineering? (1 point)

A) The delivered system is too costly
B) The contractor loses money
C) Developers do not understand the requirements
D) The customer is highly satisfied with the system

Question 34

Which **three** of the following are important perspectives on requirements? (1 point)

A) The hierarchical perspective
B) The data perspective
C) The dynamic perspective
D) The functional perspective
E) The behavioural perspective

Question 35

Which of the following can be elements of an activity diagram? (2 points)

	True	**False**
An action / activity	❒	❒
A start node	❒	❒
A control flow	❒	❒
A fork	❒	❒
A sink	❒	❒

Question 36

Which **one** of the following conflict types best characterizes the following statement? “I think open source solutions are the way to go even though others disagree.” (1 point)

A) Subject conflict
B) Interest conflict
C) Value conflict
D) Relationship conflict

Question 37

Benefits of documentation standards do **not** include which one of the following? (1 point)

A) They simplify training new staff
B) They make it easier to find specific content
C) They require less thought
D) They simplify verification of completeness

Question 38

Which statements are true and which are **false**? (2 points)		
	True	**False**
Data flow diagrams can be used to indicate parallel flows	❒	❒
Activity diagrams can be used to indicate parallel flows	❒	❒
Data flow diagrams can be used to indicate flow of control	❒	❒
Activity diagrams can be used to indicate flow of control	❒	❒

Question 39

Which **one** of the following defines best the concurrency element of a UML state machine diagram? (1 point)

A) Tasks that are performed in parallel
B) Activities performed while the system Waits for input
C) Transitions that happen at the same time
D) Multiple states may exist at the same time

Question 40

Which **one** of the following conflict resolution techniques is most likely to alienate one or more stakeholders? (1 point)

A) Compromise
B) Definition of variants
C) Overruling
D) Decision matrices

Question 41

Is the following requirement verifiable? (1 point)		
	True	**False**
Recovery time shall ensure no loss of productivity in the call centre.	❒	❒

Question 42

Which of the following are possible examples of a universal quantifier? (2 points)		
	True	**False**
Verbs are restated as nouns	❒	❒
All users shall have access to all functionality at all times	❒	❒
Negative numbers are never allowed in amount fields	❒	❒

Question 43

A complete requirement statement must include which of the following? (2 points)		
	True	**False**
Legal obligation and core of the requirement	❒	❒
The type of the activity required	❒	❒
Objects	❒	❒
Logical and/or temporal conditions	❒	❒

Question 44

When evaluating potential tools which **one** of the following views need **not** be considered? (1 point)

A) Provider view
B) Sales team compensation plan.
C) Technical view

Question 45

Which of the following are features of a requirements management tool? (2 points)		
	True	**False**
Identify artefacts uniquely	❒	❒
Support views over the data	❒	❒
Manage logical relationships between information	❒	❒

These 45 questions contain 68 points in total.
Passing this test requires at least 70% of the total amount of points.
This means that you have to score at least 48 points to pass.

Answers:

Q1 : B
Q2 : C
Q3 : T, T, T, T
Q4 : T, F, F, F
Q5 : B
Q6 : D
Q7 : C
Q8 : B
Q9 : A
Q10 : D
Q11 : F, F, T, T
Q12 : Y, Y, N, Y, N
Q13 : C
Q14 : F, T, T, T
Q15 : A, B
Q16 : C
Q17 : B
Q18 : A, D
Q19 : F, F, T, T, T, F, T, F
Q20 : C, E
Q21 : B, D
Q22 : A, E
Q23 : B, D, F
Q24 : A, B
Q25 : A
Q26 : T, T, F, T, F
Q27 : C, F
Q28 : A, C, D
Q29 : A, B
Q30 : F, F, T, T
Q31 : S, S, S, U, U
Q32 : F, T, T, T
Q33 : C
Q34 : B, D, E
Q35 : T, T, T, T, F
Q36 : C
Q37 : C
Q38 : F, T, F, T
Q39 : D
Q40 : C
Q41 : F
Q42 : F, T, T
Q43 : T, T, T, T
Q44 : B
Q45 : T, T, T