

SOFTWARE ENGINEERING – MID-TERM EXAM

Year: 2022	Blocks: 1 to 3a	Date: Wednesday, may 11, 2022	Time: 60'	Type A
Surname(s):	Name:		NIA:	

RULES: **Evaluation over 20 points**
Well answered questions: + 1.0
Poorly answered questions: - 0.25
Unanswered questions: ± 0.0

BLOCK 1 – BASIC TOPIS

1) In the field of software engineering, the basic concepts are:

- a) Problem, specification, algorithm, program.
- b) Problem domain, solution domain.
- c) Analysis, design, implementation.
- d) Requirements, analysis, design, coding, testing, acceptance.
- e) None of the above.

2) Main Software Engineering objectives focus on:

- a) Implementation and Development.
- b) Minimize cost.
- c) Operational area, Review area and Transitional area.
- d) Only on Efficiency.
- e) None of the above.

3) The relevant stages in the Software Life Cycle are:

- a) Requirements, analysis, design, coding, testing, acceptance.
- b) Requirements, analysis, design, development, testing.
- c) Analysis, design, development, testing, validation.
- d) Analysis, design, coding, testing.
- e) None of the above.

4) Which of the following statements about the Evolutionary model is true?

- a) It is a Start-to-End at each defined stage.
- b) In each iteration a new feature is added, but always keeping in mind the global vision.
- c) Construction is based on short feature additions to the final project in one shot.
- d) The end of each phase must be defined.
- e) None of the above.

5) What does the Design not involve?

- a) Minimize the distance between the problem domain and the solution domain.
- b) It must be structured to admit changes.
- c) It must be uniform and robust.
- d) Design is writing code.
- e) None of the above.

6) In reference to the design document:

- a) Outlines the overall view of the elements/components.
- b) Defines how the overall structure and its behaviour will be implemented.
- c) It must be derived from the requirements.
- d) It includes the characteristics and relationships of the software elements.
- e) All of the above.

7) Which of the following is not a software development paradigm?

- a) Waterfall.
- b) Prototyping.
- c) Incremental
- d) Evolutionary.
- e) None of the above.

8) Which of the following statements about the Agile Software Development is false?

- a) It embraces changes in requirements.
- b) The role of the participants never changes.
- c) Employers and developers should work together on a daily basis during the entire project.
- d) Deliver functional software frequently, from a couple of weeks to a couple of months, with a preference for the shorter time frame.
- e) None of the above.

9) What is the main responsibility of the 'Scrum Master' role?

- a) Decide the Product Backlog.
- b) Set up the meetings and monitor the progress.
- c) Validate the product.
- d) Represents the client.
- e) None of the above.

10) Which of the following statements is true?

- a) The Sprint Backlog is created only by the Scrum Team.
- b) The duration of the Sprint Backlog is the whole project cycle.
- c) The Product Backlog is more detailed than the Sprint Backlog.
- d) The Product Backlog is accurate and can not be changed.
- e) All of the above.

11) Which of the following statements about the phases of SCRUM is true?

- a) System requirements never change.
- b) The daily Scrum meeting is a session to resolve doubts about the requirements.
- c) The product owner only participates in the project kick-off.
- d) No external influence can interfere with the team during the sprint.
- e) None of the above.

12) In SCRUM to check the achievement of the objectives, which meeting is used?

- a) Sprint planning meeting.
- b) Daily scrum meeting.
- c) Sprint review meeting.
- d) Retrospective meeting.
- e) All of the above.

13) What is the Task Board in SCRUM?

- a) A 2D matrix to organize and manage tasks and backlogs.
- b) A tool to describe and create user stories.
- c) A tool for the management of project planning.
- d) A graphical tool to monitor developers' progress.
- e) None of the above.

14) The objective of the software analysis phase is:

- a) Understand the problem domain.
- b) Understand the problem domain and generate the requirements specification.
- c) Understand the problem domain, generate the requirements specification, describe the solution domain.
- d) Understand the problem domain and describe the solution domain.
- e) None of the above.

15) Which of the following is a functional requirement?

- a) Maximum of 2 seconds for a specific page to load.
- b) Send an email when the customer opens a new account.
- c) The system must handle up to 500 users concurrently.
- d) Users interact with the system using a web browser.
- e) None of the above.

16) Which of the following is a non-functional requirement related to a Design Objective?

- a) Users must connect using a smartphone.
- b) The database must support at least 10 million entries.
- c) In the case of an error, the system must be restarted within 1 minute.
- d) Maintenance of the system must be simple.
- e) None of the above.

17) Which of the following statements about the requirements gathering is false?

- a) In the requirements gathering process, several different methods can be used at the same time.
- b) The prototype is an example without adding detail functionality.
- c) Requirements' gathering is the process of generating a list of all requirements from different sources.
- d) User Observation should experience the actual operations on the customer side.
- e) None of the above.

18) Which of the following statements is true?

- a) Interviews with the client are a direct source to obtain the user requirements.
- b) Surveys require a lot of effort and time.
- c) Documentation review needs to be done by the development team.
- d) Brainstorming must be managed to be profitable.
- e) All of the above.

19) Which of the following statements about the principles of analysis is false?

- a) A shared notation between different methods is essential for an effective analysis.
- b) Partitioning is necessary to understand the structure of complex systems.
- c) Abstraction makes it possible to define an entity or a problem in general terms.
- d) Projection is necessary to define the system from different points of view.
- e) None of the above.

20) Which of the following statements about the S.R.S. is true?

- a) This document describes only the final implementation.
- b) This document only lists the requirements that shall be implemented.
- c) This document never changes.
- d) For easy to read, the natural language is preferred for this document.
- e) None of the above.

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ANSWERS TO THE TEST

Only the answers indicated in this table will be taken into account in the correction

1	a	b	c	d	e	11	a	b	c	d	e
2	a	b	c	d	e	12	a	b	c	d	e
3	a	b	c	d	e	13	a	b	c	d	e
4	a	b	c	d	e	14	a	b	c	d	e
5	a	b	c	d	e	15	a	b	c	d	e
6	a	b	c	d	e	16	a	b	c	d	e
7	a	b	c	d	e	17	a	b	c	d	e
8	a	b	c	d	e	18	a	b	c	d	e
9	a	b	c	d	e	19	a	b	c	d	e
10	a	b	c	d	e	20	a	b	c	d	e