

# PB007: Term 2022/01/04 - Test

Name and Surname - fill in the field	Personal ID No. (Učco)	Test Sheet No.
		<b>1</b>

90 minutes total (test + modelling); A>=82, 82>B>=74, 74>C>=66, 66>D>=58, 58>E>=50, 50>F

- 1** (5 points) Which of the following are the characteristics of agile development? // Scoring: sum of options
- A** Iterative approach
  - B** Embracing change in requirements (ability to adapt to the change)
  - C** Controlled and rigorous development process
  - D** Incremental approach
  - E** Frequent delivery of the system to the customer
  - F** Formalized quality assurance

- 2** (5 points) Cognitive mechanisms that support understanding of complex models are: // Scoring: sum of options
- A** Chunking (corresponds to modularity)
  - B** Spirals (correspond to iterations)
  - C** Schemata (corresponds to patterns)
  - D** Hierarchies (corresponds to hierarchical layering)
  - E** Cycles (corresponds to mutual dependencies)

- 3** (5 points) Choose the options putting SW process models to the correct order (oldest to newest). // Scoring: exact fit
- A** Waterfall, Spiral, Rational Unified Process
  - B** Spiral, Rational Unified Process, Waterfall, Scrum
  - C** Waterfall, Spiral, Scrum
  - D** Rational Unified Process, Spiral, Waterfall
  - E** Scrum, Rational Unified Process, Spiral

- 4** (5 points) Which of the following descriptions best describes the lifelines in the context of the UML Sequence diagram? // Scoring: exact fit
- A** A lifeline represents a single participant in an interaction.
  - B** A lifeline is a process represented with a sequence of messages following each other.
  - C** A lifeline is a uniquely identifiable message sent between participants in a Sequence diagram.
  - D** A lifeline is the communication path through which two objects can send messages to each other.

- 5** (5 points) Consider the following examples of relationships in a UML Class Diagram. Which option gives the best matching of the relationships to their usage? // Scoring: exact fit
- A** Car-Driver is an association, Car-VolvoXC90 is an inheritance, Car-Engine is a composition.
  - B** Car-Driver is an association, Car-VolvoXC90 is a composition, Car-Engine is an inheritance.
  - C** Car-Driver is an inheritance, Car-VolvoXC90 is an association, Car-Engine is a composition.
  - D** Car-Driver is a composition, Car-VolvoXC90 is an association, Car-Engine is an inheritance.
  - E** Car-Driver is a composition, Car-VolvoXC90 is an inheritance, Car-Engine is an association.

- 6** (5 points) Which of the following phases after the initial system development best expresses the situation when the system is in use but no further changes are made to it (not even for the purpose of error correction). // Scoring: exact fit
- A** Phase-out
  - B** Release
  - C** Servicing
  - D** Maintenance

- 7** (5 points) What is the main (and statistically most common) reason why software projects fail (are not completed, not delivered in expected time or scope)? // Scoring: exact fit
- A** Improperly chosen development methodology
  - B** Lack of qualified people in the team
  - C** Absence of automated testing
  - D** Poor requirements definition
  - E** Missing system analysis and design