

# **CS-3009: Software Engineering**

Serial No:

**Sessional Exam-I**

**Total Time: 60 min**

**Total Marks: 80**

Saturday, 12<sup>th</sup> March, 2022

## **Course Instructors**

Dr. Syeda Javaria Imtiaz, Dr. Mir  
Suleman Sarwar

\_\_\_\_\_  
Signature of Invigilator

\_\_\_\_\_  
Student Name

\_\_\_\_\_  
Roll No.

\_\_\_\_\_  
Section

\_\_\_\_\_  
Signature

**DO NOT OPEN THE QUESTION BOOK OR START UNTIL INSTRUCTED.**

### **Instructions:**

1. Attempt on question paper. Attempt all of them. Read the question carefully, understand the question, and then attempt it.
2. No additional sheet will be provided for rough work. Use the back of the last page for rough work.
3. If you need more space write on the back side of the paper and clearly mark question and part number etc.
4. After asked to commence the exam, please verify that you have **Ten (10)** different printed pages including this title page. There are a total of **Four (4)** questions.
5. Use permanent ink pens only. Any part done using soft pencil will not be marked and cannot be claimed for rechecking.

	<b>Q-1</b>	<b>Q-2</b>	<b>Q-3</b>	<b>Q-3</b>	<b>Total</b>
<b>Marks Obtained</b>					
<b>Total Marks</b>	<b>30</b>	<b>15</b>	<b>20</b>	<b>15</b>	<b>80</b>

# National University of Computer and Emerging Sciences

FAST School of Computing

Spring-2025

Islamabad Campus

## Question 1 [30 Marks]

*Fill in the correct answer in the below sheet. Overwriting and cutting will result in zero marks.*

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

**1. What are the features of Software Code?**

- a) simplicity
- b) accessibility
- c) **modularity**
- d) all of the above

**2. What is the major drawback of the Spiral Model?**

- a) higher amount of risk analysis
- b) **does not work well for smaller projects**
- c) additional functionalities are added later on
- d) none of the mentioned

**3. Which of the following models is best suited when the requirements of the software are not decided and also the user is not sure about how he wants the user interface to look like?**

- a) Classical waterfall model
- b) **Prototyping model**
- c) Evolutionary model
- d) None of the above

**4. Scrum is a scalable framework. The following statement is**

- a) **True**
- b) False
- c) Depends on project
- d) None of the above

**5. What does a Burndown Chart display?**

- a) **Amount of remaining work with respect to time**
- b) The velocity of the team
- c) The capacity of the team members
- d) How many more items can be picked up in a Sprint
- e) Work remaining with respect to overall backlog

**6. What does it mean to say that an event has a timebox?**

- a) The event must happen at a set time.
- b) The event must happen by a given time.
- c) The event must take at least a minimum amount of time.
- d) **The event can take no more than a maximum amount of time**

**7. Which of these activities is not part of software process?**

- a) **Software dependence**
- b) Software development
- c) Software validation
- d) Software specification

# National University of Computer and Emerging Sciences

FAST School of Computing

Spring-2025

Islamabad Campus

---

8. How do you create agile processes to manage unpredictability?

- a) Requirements gathering must be conducted very carefully
- b) Risk analysis must be conducted before planning takes place
- c) Software increments must be delivered in short time periods
- d) Software processes must adapt to changes incrementally
- e) **Both c and d**
- f) Both a and d

9. Which is not one of the key questions that is answered by each team member at each daily Scrum meeting?

- a) What did you do since the last meeting?
- b) **What obstacles are you creating?**
- c) What is the cause of the problem you are encountering?
- d) What do you plan to accomplish by the next team meeting?

10. Which scrum meeting is involving feedback from client side?

- a) Sprint Retrospective
- b) Release Planning
- c) **Sprint Review**
- d) Sprint planning
- e) Daily scrum

11. New requirements or feature requests can be added during the sprint:

- a) True
- b) **False**

12. In the waterfall model, it is assumed that all the requirements can be elicited at the beginning of the project.

- a) **True**
- b) False

13. Which of the following is not a phase for Rational Unified Process (RUP)?

- a) Inception
- b) Elaboration
- c) **Risk Analysis**
- d) Transition

14. “Consider a system where, a “heat sensor” detects an intrusion and alerts the security company.” What kind of a requirement the system is providing?

- a) **Functional**
- b) Non-Functional
- c) Domain requirement
- d) None of the mentioned

# National University of Computer and Emerging Sciences

FAST School of Computing

Spring-2025

Islamabad Campus

---

**15. Which of the following statements explains portability in non-functional requirements?**

- a) **It is a degree to which software running on one platform can easily be converted to run on another platform**
- b) It cannot be enhanced by using languages, OS' and tools that are universally available and standardized
- c) The ability of the system to behave consistently in a user-acceptable manner when operating within the environment for which the system was intended
- d) None of the mentioned

**16. In the V-Model, what is the primary purpose of the "Acceptance Testing" phase?**

- A) To verify that the system meets the business requirements**
- B) To test individual components of the system
- C) To check database interactions
- D) To debug the source code

**17. Which of the following types of meetings is not defined by SCRUM?**

- a) **Product Owner Meeting**
- b) Sprint Retrospective
- c) Daily Scrum
- d) Sprint Review

**18. Which of the following is delivered at the end of the Sprint?**

- a) A document containing test cases for the current sprint
- b) An architectural design of the solution
- c) **An increment of Done software**
- d) Wireframes designs for User Interface

**19. A process of software development where requirements are broken down into multiple standalone modules of software development cycle**

- a) Waterfall model
- b) RAD model
- c) Evolutionary process model
- d) **Incremental process model**

**20. According to Sommerville, what can be considered as a principal distinction between plan-driven and agile processes? (Encircle 1 option only).**

- a) Agile process activities are iterative in nature while they are sequential in plan-driven processes.
- b) Agile process activities incorporate incremental development while plan-driven process activities do not.
- c) **Plan-driven process activities are planned in advance while planning is incremental in agile processes.**

# National University of Computer and Emerging Sciences

FAST School of Computing

Spring-2025

Islamabad Campus

---

- d) Agile processes explicitly incorporate risk assessment and resolution while plan-driven processes do not.
- 21. A team working on XP methodology, found after few iterations that the code has become very brittle and patchy. What step should be taken to fix this problem?**
- a) Reviewing
  - b) Recoding
  - c) **Refactoring**
  - d) Debugging
- 22. Which is one of the most important stakeholders from the following?**
- a) Entry level personnel
  - b) Middle level stakeholder
  - c) Managers
  - d) **Users of the software**
- 23. Which of the following is not an agile value?**
- a) Individuals and interactions over processes and tools
  - b) Working software over comprehensive documentation
  - c) Customer collaboration over contract negotiation
  - d) Responding to change over following a plan
  - e) **None of the above (i.e., all are agile values)**
- 24. Which of the following is the best example of a User Story?**
- a) Nigel wants to book a ticket for holiday so that he can go for a holiday for 5 days.
  - b) **As a customer, I want to add an item in my shopping basket, so that I can buy more items at once.**
  - c) As a librarian, I want to have a web-based solution for a library management system.
  - d) As a doctor, I think I should have an online patient schedule system, so I can manage and keep track of my patients.
- 25. Why is the idea that “Adding more people to a project speed it up” a myth?**
- a) More people require additional communication and coordination.
  - b) New team members need time to get up to speed.
  - c) Some tasks cannot be parallelized, causing delays.
  - d) **All of the above.**
- 26. Team size in scrum is**
- a) **4 – 9 people**
  - b) 10 – 15 people
  - c) 15 – 20 people
  - d) Decided by the scrum master
- 27. In extreme programming, CRC cards stands for**
- a) **Class responsibility collaboration cards**
  - b) Class relation collaborator cards
  - c) Class responsibility condition cards
  - d) None of the above

# National University of Computer and Emerging Sciences

FAST School of Computing

Spring-2025

Islamabad Campus

---

**28. Which of the following scrum ceremonies are informal?**

- a) Sprint review
- b) Sprint retrospective
- c) **Both a and b**
- d) None of the above

**29. What is software?**

- a) Computer program
- b) Computer program and testing
- c) **Computer program and associated documentation**
- d) None of the above

**30. Subset of user stories from the project backlog that are planned to be delivered as the part of a sprint is known as**

- a) Sprint requirements
- b) User requirements
- c) User stories
- d) **Sprint backlog**