000686

PRN:		Course Code :	U16PC301

Second Year **B. C. A.** Semester End Examination Winter 2024

Software Engineering

Day and Date: Fri 22 Nov 2024 Max Marks: **50**

Time : 10:30AM To 12:30PM Duration: **02** hrs

Instructions:

1) All questions are compulsory.

Q.1	**Attempt the following.**	Marks	Bloom's Level	CO
a)	Which of the following models is an example of a prescriptive software development model? A) Spiral Model B) Incremental Model C) Extreme Programming D) Agile Development	01	L1	CO1
b)	In Agile Development, which of the following practices is commonly associated with Extreme Programming (XP)? A) Comprehensive documentation B) Continuous integration C)Waterfall approach D) Sequential development	01	L1	CO1
c)	Which UML diagram is primarily used to represent the interactions between objects in a system over time? A) Class diagram B) Use case diagram C) Sequence diagram D) Deployment diagram	01	L1	CO1
d)	Which of the following is NOT a characteristic of a well-written Software Requirements Specification (SRS)? A) Complete B) Ambiguous C)Consistent D) Verifiable	01	L1	CO1
e)	What is the main advantage of using Object-Oriented Metrics compared to traditional metrics like Lines of Code (LOC)? A) They help in understanding the quality and	01	L1	CO1

ESE

maintainability of the code based on its structure and relationships.
B) They provide a clear measure of the application's runtime performance.
C) They are easier to calculate and require less time.
D) They can be directly linked to cost estimation and budgeting.

f)	Which of the following metrics is primarily used to measure the size of software in terms of user requirements? A) Lines of Code (LOC) B) Code Coverage C) Cyclomatic Complexity D) Function Points (FP)	01	L1	CO1
g)	Which of the following models is specifically designed for estimating software project costs in the context of traditional software development? A) Agile Estimation Techniques B) Make/Buy Decision Framework C) COCOMO II D) Function Point Analysis	01	L1	CO1
h)	In project scheduling, which of the following best describes the relationship between people and effort? A) More people always reduce the overall effort required for tasks. B) The number of people involved does not impact the effort estimation at all. C) Effort can be distributed among people, but adding too many people can lead to communication overhead, potentially increasing overall effort. D) Project scheduling is independent of the team's size and skill level.	01	L1	CO1
i)	What is the primary purpose of risk identification in the context of software development? A) To recognize and document potential risks that could affect the project's success B) To determine how risks will be communicated to stakeholders C) To eliminate all potential risks before project commencement D) To calculate the financial impact of each risk identified	01	L1	CO1
j)	Which of the following best describes the purpose of 'Test Oracles' in software testing?	01	L1	CO1

ESE

A) They are used to determine the test strategy for a project.
B) They provide a source of expected results against which actual results can be compared.
C) They are responsible for executing the test cases.
D) They are methods used to automate testing processes.

Q.2		**Attempt the following.**			
	a)	Explain layered technology in software architecture in detail with its diagram.	05	L2	CO1
	b)	Describe Eliciting requirements in detail.	05	L2	CO2
		OR			
	b)	What is SRS? Explain its characteristics and components.	05	L1	CO2
Q.3		**Attempt any two.**			
	a)	Describe the importance of architectural design in software development. What are the key components that should be considered when creating an architectural design for a software project?	05	L2	CO2
	b)	Illustrate Coupling and Cohesion in detail with its types.	05	L2	CO3
	c)	Compare functional oriented approach versus object oriented approach.	05	L2	CO3
Q.4		**Attempt any two.**			
	a)	Classify the process of software project estimation.	05	L4	CO3
	b)	Explain COCOMO II model for software project estimation?	05	L5	CO4
	c)	How does estimation in agile development differ from traditional estimation methods	05	L1	CO1
Q.5		**Attempt any two.**			
	a)	Distinguish between verification and validation in the context of software testing.	05	L4	CO4
	b)	List the types of tests included in Functional Testing.	05	L4	CO4
	c)	Describe at least two techniques used for risk identification.	05	L2	CO2

*****

ESE