23NMB425N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION MAY 2025
(Fourth Semester)

Branch – **NETWORKING AND MOBILE APPLICATION**

SOFTWARE ENGINEERING

Time: Three Hours | Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is NOT a phase in the software development life cycle (SDLC)? a) Requirements gathering b)Design c)Marketing d)Testing	K1	CO1
	2	Outline why is it important to assess and improve software processes? a) To increase the number of developers b)To reduce the cost of hardware c) To enhance software quality and productivity d) To eliminate the need for documentation	K2	CO1
2	3	Which of the following best describes the primary role of a software engineer? a) Writing software documentation b) Designing software interfaces c) Developing, testing, and maintaining software systems d) Managing hardware resources	K1	CO2
	4	Rephrase the purpose of "prototype evolution" in the recommended process model? a) To create a new prototype based on user feedback b) To release the final version of the product c) To evaluate and test the completed system d) To discard early prototypes	K2	CO2
3	5	Which of the following is the first step in the requirements engineering process? a) Requirements gathering b) Validating requirements c) Establishing the groundwork d) Developing use cases	K1	CO3
	6	Rephrase the purpose of "monitoring requirements" during the software development process? a) To ensure that the requirements are documented b) To track changes to the requirements throughout the project to ensure alignment with stakeholders' needs c) To release early versions of the software d) To test software functionality before release	K2	CO3
4	7	What is the primary goal of software quality? a) To reduce development time b) To ensure the software functions correctly according to requirements c) To increase the complexity of software d) To minimize costs during production	K1	CO4
	8	Show which testing technique focuses on examining the internal structure of the software? a) White-box testing b) Black-box testing c) User acceptance testing d) Regression testing	K1	CO4
5	9	Which of the following is an example of a product metric? a) Code complexity b) Time taken to complete development c) Team performance d) Defect density	K1	CO5

Cont...

	10	Extend the primary objective of risk mitigation in software project is _____ a) To identify all possible risks before they occur b) To eliminate all risks during the planning phase c) To reduce the likelihood and impact of risks d) To avoid all risks at any cost	K2	CO5

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Give an example of a prescriptive process model and explain how it can be applied in practice.	K2	CO1
		(OR)		
	11.b.	Explain the significance of defining framework activities in a software process model.		
2	12.a.	Inference the purpose of "requirements definition" phase in the software process model.	K4	CO2
		(OR)		
	12.b.	Analyze the impact of team structure on the success of a software development project.		
3	13.a.	Build the primary goal of requirements gathering in the software development process.	K3	CO3
		(OR)		
	13.b.	Develop the process of validating requirements with stakeholders.		
4	14.a.	Build the concept of the "software quality dilemma."	K3	CO4
		(OR)		
	14.b.	Develop the purpose of a strategic approach to software testing. Explain.		
5	15.a.	Analyze how would you apply metrics such as code complexity and defect density to improve the quality of a software product?	K4	CO5
		(OR)		
	15.b.	Examine reactive and proactive risk strategies. Provide an example of each.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine the role of software engineering in creating high-quality software and how it differs from general programming practices.	K4	CO1
2	17	Inference the human aspects of software engineering, discussing the characteristics of a software engineer, the psychology involved, and the impact of social dynamics in software teams.	K4	CO2
3	18	Analyze the challenges involved in building an analysis model for a large-scale, distributed software system.	K4	CO3
4	19	Justify the role of planning and report keeping in the software testing process. How does it contribute to the success of the project?	K5	CO4
5	20	Given a software project with potential risks such as changes in user requirements, resource limitations, and technological uncertainties, how would you implement risk mitigation strategies to address these issues? Determine the process.	K5	CO5

Z-Z-Z END