GEETHANJALIINSTITUTEOFSCIENCE&TECHNOLOGY
(ANAUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu)
(Accredited by NAAC with "A" Grade, NBA(EEE,ECE&ME)&ISO9001:2008 Certified Institution)

QUESTION BANK (DESCRIPTIVE)

Subject Name: Software Project Management
Subject Code: 22A0522C
Course & Branch : B.Tech & DS
Year & Semester: III B.Tech II Semester **Regulation:** RG22

Unit-1

S.No	2 Marks Questions (Short)	[BT Level][CO][Marks]
1	Define software and project	L1, CO1, 2 M
2	Define software project management	L1, CO1, 2 M
3	What is an incremental software development model?	L1, CO1, 2 M
4	List various layered technology layers.	L1, CO1, 2 M
5	List various software development life cycle phases	L1, CO1, 2 M
6	What is the purpose of the requirement analysis phase?	L1, CO1, 2 M
7	What is one major disadvantage of the waterfall model?	L1, CO1, 2 M
8	List the phases of the waterfall model.	L1, CO1, 2 M
9	Give two examples of evolutionary process models.	L1, CO1, 2 M
10	What is the main characteristic of the Concurrent model?	L1, CO1, 2 M

S.No	Descriptive Questions (Long)	[BT Level] [CO][Marks]
1	(a)Explain the scope of software engineering and its importance in modern computing. (b) What are the economic aspects of software engineering? How does software development contribute to business growth?	L2, CO1,6 M L2, CO1,6 M
2	(a) Discuss the historical evolution of software engineering and its impact on current practices. (b) Describe the different aspects of software maintenance and their significance.	L2, CO1,6 M L2, CO1,6 M
3	(a)Explain the concept of layered technology in software engineering with a diagram. (b)Describe the different phases of the Software Development Life Cycle (SDLC) with a suitable diagram.	L2, CO1,6 M L2, CO1,6 M

4	(a)Explain the Waterfall model with a neat diagram. What are its advantages and disadvantages? (b) Explain the working of the Incremental model with a suitable diagram. How does it improve over the Waterfall model?	L2, CO1,6 M L2, CO1,6 M
5	(a)Describe the Evolutionary model of software development. How does it help in reducing project risks? (b)Explain in detail about V-model.	L2, CO1,6 M L2, CO1,6 M
6	Compare the Waterfall, Prototyping and Spiral model. List the features of each model, advantages and disadvantages and a type of application where the model will be acceptable.	L2, CO1, 12 M
7	(a) Explain the Concurrent development model with a diagram. How does it handle parallel development? (b) Explain the Spiral Model of software development with a neat diagram. Why is it considered a risk-driven model?	L2, CO1,6 M L2, CO1,6 M
8	(a) Explain the role of specification and design in software engineering. Why are they crucial in the development process? (b) Discuss the importance of team programming in software engineering. What challenges does it address?	L2, CO1, 6 M L2, CO1, 6 M
9	How does the Spiral Model different from the Waterfall and Incremental models in terms of flexibility and risk handling?	L2, CO1, 12 M
10.	(a) Explain the role of software processes, methods, and tools in software engineering. (b) Compare Incremental and Evolutionary process models. Which one is more suitable for modern software development?	L2, CO1, 6 M L2, CO1, 6 M

Unit-2

S.No	2 Marks Questions (Short)	[BT Level][CO][Marks]
1	What is agility in software development?	L1, CO2, 2 M
2	What are the four key values of the Agile Manifesto?	L1, CO2, 2 M
3	What are the five XP values?	L1, CO2, 2 M
4	What are the different types of Agile methodologies?	L1, CO2, 2 M
5	What is Pair Programming in XP?	L1, CO2, 2 M
6	What is agile modeling?	L1, CO2, 2 M
7	What is the purpose of the Agile Unified Process (AUP)?	L1, CO2, 2 M
8	What are the four key factors of the management spectrum in software project management?	L1, CO2, 2 M
9	What is the role of a project manager in software development?	L1, CO2, 2 M
10	What is the difference between a software developer and a software tester?	L1, CO2, 2 M

S.No	Descriptive Questions (Long)	[BTLevel][CO][Marks]
1	(a)Explain the principles of the Agile Manifesto. How do they influence software development? (b)What is agility in software development? Explain how agile processes improve software development.	L2, CO2, 6 M L2, CO2, 6 M
2	(a) What is Agile Modeling (AM)? How does it support agile development? (b) What are the five core values of Extreme Programming (XP)? Explain their importance.	L2, CO2, 6 M L2, CO2, 6 M
3	(a)Explain the Adaptive Software Development (ASD) model. How does it different from other agile models? (b)What is the Dynamic Systems Development Method (DSDM)? Explain its key principles.	L2, CO2, 6 M L2, CO2, 6 M
4	(a)Explain the key principles of Lean Software Development (LSD) and how it reduces waste. (b) Describe the Feature-Driven Development (FDD) model. How does it focus on feature-based planning?	L2, CO2, 6 M L2, CO2, 6 M
5	Explain the management spectrum in software project management. What are its four key factors?	L2, CO2, 12 M
6	(a)Discuss the role of people in software project management. How do team dynamics impact success?	L2, CO2, 6 M

	(b) What is Industrial XP? How does it extend traditional XP practices for larger-scale projects?	L2, CO2, 6 M
7	(a) What is Scrum? Describe its key components, such as roles, artifacts, and events. (b) Describe the Crystal methodology in Agile development. How does it differ from other Agile models?	L2, CO2, 6 M L2, CO2, 6 M
8	(a)Describe the Agile Unified Process (AUP). How is it an adaptation of the Rational Unified Process (RUP)? (b) Discuss the role of people in software project management. Why is team management critical for project success?	L2, CO2, 6 M L2, CO2, 6 M
9	(a) Explain the XP process. How does it promote flexibility and continuous improvement? (b) Discuss the XP debate. What are the major criticisms and advantages of Extreme Programming?	L2, CO2, 6 M L2, CO2, 6 M
10	(a) Explain the four P's of the management spectrum (People, Product, Process, and Project). Why are they important? (b) How does defining a product clearly impact project success? Discuss key factors to consider in software product management.	L2, CO2, 6 M L2, CO2, 6 M

Unit-3

S.No	2 Marks Questions (Short)	[BT Level][CO][Marks]
1	Define Lines of Code (LOC) metric.	L1, CO3, 2 M
2	What is a Function Point (FP) in software measurement?	L1, CO3, 2 M
3	What are software process metrics?	L1, CO3, 2 M
4	What is the difference between size-oriented and function-oriented metrics?	L1, CO3, 2 M
5	Define Defect Removal Efficiency (DRE).	L1, CO3, 2 M
6	What is meant by software quality metrics?	L1, CO3, 2 M
7	What is Process-Based Estimation?	L1, CO3, 2 M
8	What is software project planning?	L1, CO3, 2 M
9	Define software scope in project management.	L1, CO3, 2 M
10	Define Problem-Based Estimation	L1, CO3, 2 M

S.No	Descriptive Questions (Long)	[BT Level][CO][Marks]
1	Compare size-oriented and function-oriented software metrics with examples.	L2, CO3, 12 M

2	Explain LOC (Lines of Code) and Function Point (FP) metrics. How are they used in software measurement?	L2, CO3, 12 M
3	How can software quality be measured? Discuss different software quality metrics.	L2, CO3, 12 M
4	Explain the concept of software sizing and its role in project estimation.	L2, CO3, 12 M
5	Compare Problem-Based Estimation and Process-Based Estimation with examples.	L2, CO3, 12 M
6	How does Process-Based Estimation work? Explain with an example	L2, CO3, 12 M
7	What is software scope? Why is it important in project estimation?	L2, CO3, 12 M
8	Discuss different types of resources required for a software project.	L2, CO3, 12 M
9	Describe how decomposition techniques help in accurate project estimation.	L3, CO3, 12 M
10	Describe software project estimation and its significance in project management	L2, CO3, 12 M

Unit-4

S.No	2 Marks Questions (Short)	[BT Level][CO][Marks]
1	What is COCOMO II model?	L1, CO4, 2 M
2	What is an empirical estimation model?	L1, CO4, 2 M
3	How does COCOMO II differ from COCOMO I?	L1, CO4, 2 M
4	What is a story point in Agile estimation?	L1, CO4, 2 M
5	Define velocity in Agile project management.	L1, CO4, 2 M
6	What is a Make/Buy decision in software engineering?	L1, CO4, 2 M
7	Why is effort distribution important in software project management?	L1, CO4, 2 M
8	What is a task set in project scheduling?	L1, CO4, 2 M
9	What is a timeline chart in project scheduling?	L1, CO4, 2 M
10	What is Earned Value Analysis (EVA)?	L1, CO4, 2 M

S.No	Descriptive Questions (Long)	[BT Level] [CO][Marks]
1	Explain the structure of empirical estimation models with examples.	L2, CO4, 12 M

2	Describe the COCOMO II model and its different modes of estimation.	L2, CO4, 12 M
3	Compare COCOMO I and COCOMO II models.	L3, CO4, 12 M
4	How is software estimation done in Agile development? Explain any two Agile estimation techniques.	L3, CO4, 12 M
5	What is a Make/Buy decision in software engineering? What factors influence it?	L2, CO4, 12 M
6	Explain the relationship between people and effort in software project scheduling.	L2, CO4, 12 M
7	What is a task set? Explain its role in software project scheduling with an example.	L2, CO4, 12 M
8	What is a timeline chart in project scheduling? How is it used to manage software projects?	L3, CO4, 12 M
9	Explain Earned Value Analysis (EVA) and how it helps in project tracking.	L2, CO4, 12 M
10	Describe the process of defining a task network and its significance in project planning.	L3, CO4, 12 M

Unit-5

S.No	2 Marks Questions (Short)	[BT Level][CO][Marks]
1	What are the four main risk strategies in risk management?	L1, CO5, 2 M
2	What are software risks?	L1, CO5, 2 M
3	What is risk projection?	L1, CO5, 2 M
4	What is risk refinement?	L1, CO5, 2 M
5	What are the components of the RMMM plan?	L1, CO6, 2 M
6	What is Software Configuration Management (SCM)?	L1, CO6, 2 M
7	What is a baseline in Software Configuration Management?	L1, CO6, 2 M
8	What is the role of an SCM repository?	L1, CO6, 2 M
9	What is version control in SCM?	L1, CO6, 2 M
10	What is status reporting in SCM?	L1, CO6, 2 M

S.No	Descriptive Questions (Long)	[BT Level] [CO][Marks]
1	Explain the four main risk strategies in risk management with examples.	L2, C05, 12 M
2	What are software risks? Classify and explain different types of software risks.	L2, C05, 12 M
3	What is risk refinement? Explain how risk refinement helps in effective risk management.	L3, C05, 12 M
4	Describe the process of risk identification in software engineering. What are the different techniques used for identifying risks?	L2, C05, 12 M
5	What are the key components of the RMMM plan? Explain its significance in software project management.	L2, C05, 12 M
6	What are the key elements of a Configuration Management System? Explain each element in detail.	L2, C05, 12 M
7	Describe the role of the SCM repository. What are its key features and contents?	L2, C05, 12 M
8	What is version control in SCM? Explain different types of version control systems with examples.	L3, C05, 12 M
9	What is a configuration audit in SCM? Explain the types and significance of configuration audits.	L3, C06, 12 M
10	What is status reporting in SCM? Explain how it helps in software development and maintenance.	L2, C06, 12 M

Signature of the Staff :

Signature of Department Academic Committee Member 1:

Signature of Department Academic Committee Member 2:

Signature of Department Academic Committee Member 3: