SREENIVASA INSTITUTE OF TECHNOGY AND MANAGEMENT STUDIES
(AUTONOMOUS)
Murukambattu, Chittoor

MCA DEPARTMENT

QUESTION BANK

for

SOFTWARE ENGINEERING (18MCA214)

Regulation **– R18**

Academic Year : **2019 – 20**

Prepared by

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Subject Name : **Software Engineering** Subject Code : **18MCA214**

Year &Sem : **II & I** Academic Year : **2019-20**

UNIT - 1 : Introduction to Software Engineering and A Generic view of Process		
The Evolving role of Software - Changing nature of Software - Legacy Software - Software myths. A layered technology- A Process Framework- CMMI- Process assessment - Personal and team Process Models.		
PART -A		
Q. No.	**Questions**	**Blooms Taxonomy Level**
1	Define Software Engineering	Remembering
2	Define Software	Remembering
3	List out the characteristics of software	Remembering
4	List out the types of software	Remembering
5	Define Legacy software	Remembering
6	List out the software myths	Remembering
7	List the process maturity levels in SEIs CMM	Remembering
8	What is the use of CMM?	Analyzing
9	List out eh different process assessment models	Remembering
10	Distinguish between team and personal process model	Understanding
11	What are the umbrella activities of a software process?	Understanding
PART –B		
1	Summarize the classification of software with suitable example each	Understanding
2	Explain about legacy software	Understanding
3	Discuss in detail about software myths	Understanding
4	Summarize the umbrella activities of a software process?	Understanding
5	Explain about CMMI with specific goal and specific practice	Understanding
6	Discuss about process assessment	Understanding
7	Discus about process framework	Understanding
8	Explain in detail about personal and team process model	Understanding
UNIT - 2 :Process Models		
The waterfall model- Incremental process models- Evolutionary process models- Specialized Process Models- Agile process - Agile process Model: Extreme programming		
PART -A		
1	Define software process.	Remembering
2	What are the pitfalls of water fall model?	Understanding
3	List out the process model in incremental model	Remembering
5	List out the process model in evolutionary model	Remembering
6	What is Aspect oriented process model?	Understanding
7	What is Agility?	Understanding
8	List out any two principles of agile model	Remembering
9	What is extreme programming in agile?	Understanding
PART -B		
1	Describe waterfall process model	Understanding
2	Criticize why incremental model is better approach than waterfall model with suitable example?	Analyzing
3	What circumstances evolutionary models are used? Comment on it with necessary example	Analyzing
4	Discuss in detail about specialized process model	Understanding

5	Why agile process model is used more in software development? Summarize the importance of the agile model with required example.	Analyzing
UNIT - 3 : Software Requirements and System Models		
Functional and non-functional requirements- User requirements- System requirements- Interface specification- The software requirements document-Feasibility studies- Requirements elicitation and analysis- Requirements validation- Requirements management. Context Models- Behavioral models- Data models- structured methods.		
PART – A		
1	Define functional requirements	Remembering
2	List out the main source of non functional requirements	Remembering
3	What is domain requirement?	Understanding
4	Define Feasibility study	Remembering
5	What is technical feasibility?	Understanding
6	What are the major components of requirement elicitation and analysis?	Understanding
7	Define requirement validation	Remembering
8	Differentiate context and behavioral model	Understanding
9	List out the components of data model	Remembering
PART –B		
1	With neat hierarchical flow, Explain about the non functional requirement with an example each	Understanding
2	What are the steps involved in interface specification?	Understanding
3	What is a Software Requirement? Explain about Software requirements document	Understanding
4	Explain about Requirements validation.	Understanding
5	Why feasibility analysis is required? Explain about different analysis for software development	Understanding
6	Explain about requirements elicitation and analysis	Understanding
7	What is Behavioral models? Explain about the types of behavioral models	Understanding
8	Explain about Context models	Understanding
9	Discuss about Data models	Understanding
UNIT - 4 : Design Engineering& Architecture, Testing Strategies		
Design process and Design quality- Design concepts- the design model - Creating an architectural design: software architecture- Data design- Architectural styles and patterns- Architectural Design. A strategic approach to software testing- Test strategies for conventional Software - Validation testing-System testing- The art of debugging.		
PART – A		
1	Define design process	Remembering
2	List the principles of a software design.	Remembering
3	What are three characteristics of evaluation of good design?	Understanding
4	List out the quality attributes of software design	Remembering
5	Define modularity	Remembering
6	Define refactoring	Remembering
7	What is cohesion?	Understanding
8	Differentiate data centered and data flow architecture	Understanding
9	Define Archetype	Remembering

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10	Define Unit testing	Remembering
11	Define integration testing	Remembering
12	Distinguish between verification and validation	Understanding
13	What is smoke testing	Understanding
14	What is debugging?	Understanding
PART –B		
1	Discuss the concepts that is adapted in software design	Understanding
2	Summarize various types of design model with suitable instance.	Understanding
3	How data design is applied in software design? Discuss	Understanding
4	Discuss in detail about brief taxonomy of architectural style	Understanding
5	Explain the process involved in architectural design	Understanding
6	Discuss about Unit testing and Integration testing	Understanding
7	Discuss about System testing	Understanding
8	Art of debugging – how it is superior that testing? Comment on it	Analyzing
UNIT - 5 :Testing Tactics, Software Measurement and Estimation		
Software testing fundamentals - White-Box testing- Basis path testing- Control structure Testing- Black box testing. Size oriented metrics- Function oriented metrics- Metrics for software quality- Empirical Estimation Models: - Quality Management: Software quality assurance- Formal Technical Reviews.		
PART – A		
1	What are the objectives of testing?	Understanding
2	What are the characteristics of good test?	Understanding
3	Distinguish beween white box and black box testing	Understanding
4	Show the flow graph notation	Understanding
5	What is equivalence partitioning?	Understanding
6	What is conditional testing?	Understanding
7	What is boundary value analysis?	Understanding
8	What are the uses of function oriented metrics?	Understanding
9	How empirical estimation is derived from regression analysis?	Analyzing
10	What are the features of COCOMO II model?	Analyzing
11	Why Formal technical review is required?	Understanding
PART –B		
1	With suitable example, Discuss about basis path testing	Understanding
2	Explain about control structure testing	Understanding
3	How graph based testing methods are achieved in black box testing? Discuss with required example	Understanding
4	Explain boundary value analysis and orthogonal array testing	Understanding
5	Discuss about function oriented metrices	Understanding
6	Explain about Empirical estimation model	Understanding
7	Explain the steps involved in software quality assurance	Understanding