

- 1) Ans: Recording software requirements is significant because :
- o It helps ensure software meets needs of its users
 - o Reduces the scope of creep
 - o Helps improve communication between stakeholders
 - o Helps facilitate testing and validation
 - o Increases the chances of success
 - o Reduces risk of failure

- 2) a) Waterfall model
- follows linear sequential process
 - well defined phases
 - sign off at each phase

b) V model

- V shaped
- Early test planning
- concurrent development and testing

c) Incremental model

- iterative and incremental
- Early delivery of working software
- feedback from users

4) Spiral model

- Risk driven
- iterative and incremental
- Risk assessment and mitigation

- 3) It contributes to in improving development in the following way
- provides common framework to improve software development
 - Helps identify and improve on most important areas
 - provides Roadmap for development
 - Reduces costs
 - Improves quality

4) charact eristic	prescriptive models	evolutionary models
Approach	sequential	incremental
flexibility	less flexible	more flexible
Adaptability	less adaptable	more adaptable
Rigor and discipline	more rigorous and disciplined	less rigorous and disciplined

- 576 waterfall Model - suitable for small projects with well defined requirements
- ① V model - for projects with complex requirements
 - ② incremental model - for projects with changing requirements
 - ③ spiral model - for projects with high risks
 - ⑤ Agile model - projects with changing requirements

Chararistic	Waterfall Model	Agile Methodologies
project planning	At start of project	done throughout project
progress tracking	Done by tracking completions of Milestones	Done on a continuous basis throughout sprint

Characteristics	Waterfall	Scrum	Kanban
Planning	done upfront	Done on ongoing basis	Done on ongoing basis
Progress tracking	Done on completion of milestones	Done throughout the sprint	Done continuously or Kanban board
Development speed	can be slow	can be fast	fast
Adaptability to change	low	Very high	very high
Customer satisfaction	low if requirements change	high	high due to customer involvement