# Chapter Quiz

# Chapter 2: Software Processes

**Your name:**

Answer all questions. 1 mark per question

1. What are the fundamental activities that are common to all software processes?

Software specification

Software design and implementation

Software validation

Software evolution

2. List 3 generic process models that are used in software engineering?

The waterfall model

Incremental development

Integration and configuration

3. Why are iterations usually limited when the waterfall model is used?

The waterfall model is a document-driven model with documents produced at the end of each phase. Because of the cost of producing and approving documents, iterations and costly and involve significant rework. Hence they are limited.

4. What are the three benefits of incremental development, compared to the waterfall model?

The cost of accommodating changes to customer requirements is reduced.

It is easier to get customer feedback on development work that has been done.

More rapid delivery and deployment of useful software to the customer is possible.

5. What are the development stages in integration and configuration?

Discover and analyse reusable software systems or components

Requirements modification

System design with reuse

Development and integration

6. What are the principal requirements engineering activities?

Requirements elicitation and analysis

Requirements specification

Requirements validation

7. Why is it increasingly irrelevant to distinguish between software development and evolution?

Few software systems are now completely new and a more realistic model of software development is of an iterative process that lasts for the lifetime of the software.

8. What are the advantages of using incremental development and delivery?

Early delivery of critical functionality to the customer

Early increments serve as prototypes to explore requirements

Lower risk of overall project failure

More extensive testing of critical customer functionality

9. What are the two different approaches to process improvement and change that have been proposed?

The process maturity approach, which has focused on improving process and project management and introducing good software engineering practice.

The agile approach, which has focused on iterative development and reducing software process overheads.

10. What are the identified levels in the SEI’s Capability Maturity Model

Initial,

Managed,

Defined,

Quantitatively managed,

Optimizing.