Chapter Quiz

Chapter 1: Introduction

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Answer all questions. 1 mark per question

1. What are the essential attributes of good software?

   Maintainability
   Dependability and security
   Efficiency
   Acceptability

2. What are the two fundamental types of software product?

   1. Generic products that are designed to meet the needs of many different customers.
   2. Customized products designed to meet the specific needs of a single customer.

3. What is software engineering?

   Software engineering is the systematic application of *engineering* approaches to the development of *software*. *Software engineering* is a direct sub-field of *engineering* and has an overlap with computer science and management science. It is also considered a part of overall systems *engineering*.

4.   What are the four fundamental activities in software processes?

> Software specification
> Software development
> Software validation and
> Software evolution

5.   What is the distinction between computer science and software engineering?

> Computer science is concerned with theories and methods of computers and software systems; software engineering is concerned with the practice of software production.

6.   What are the 4 general issues that affect many different types of software?

> 1. Heterogeneity. Software may have to execute on several different types of system.
> 2. Business and social change, which drives requirements for software change.
> 3. Security and trust - our software systems have to be secure against external and internal threats so that we can trust those systems.

7.   List 5 different types of software application.

> Any 5 from stand-alone products, interactive transaction-based systems, embedded control systems, batch processing systems, entertainment systems, systems for modelling and simulation, data collection systems, systems of systems.

8.   What software engineering fundamentals apply to all types of software systems?

1. Stand-alone applications
2. interactive transaction-based applications.
3. embedded complete system.
4. Batch processing system.
5. Entertainment System

9.   What are three key characteristics of the engineering of web-based software engineering?

Software reuse is the principal approach for constructing web-based systems, requirements for those systems cannot be completely specified in advance, User interfaces are constrained by the capabilities of web-Browser.

10.   What is a software engineering code of ethics?

A set of principles that set out, in a general way, standards of expected behaviour for professional software engineers.