**Fundamental of Software**

1. What are the characteristics of software?

a. Software is developed or engineered; it is not manufactured in the classical sense.

b. Software doesn’t “ wear out ”.

c. Software can be custom built or custom build.

d. All mentioned above

2. Compilers, Editors software come under which type of software?

a. System software

b. Application software

c. Scientific software

d.None of the above

3. Software is defined as \_\_\_\_ .

a. Instructions

b. Data Structures

c. Documents

d. All of the above

4. Efficiency in a software product does not include \_\_\_\_\_\_\_\_

a. responsiveness

b. licensing

c. memory utilization

d. processing time

5. What is a Software ?

a. Software is set of programs

b. Software is documentation and configuration of data

c. Both a and b

d. None of the mentioned

6. Which of these does not account for software failure?

a. Increasing Demand

b. Low expectation

c. Increasing Supply

d. Less reliable and expensive

7. What are attributes of good software ?

a. Software maintainability

b. Software functionality

c. Software development

d. a and b

8. Which of these is incorrect ?

a. Software engineering belongs to Computer science.

b. Software engineering is a part of more general form of System Engineering.

c. Computer science belongs to Software engineering.

d. Software engineering is concerned with the practicalities of developing and delivering useful software.

9. Which of these is true ?

a. Generic products and customized products are types of software products.

b. Generic products are produces by organization and sold to open market.

c. Customized products are commissioned by particular customer.

d. All of the above.

**Software Peoples and Organizations**

1. A software engineer can:  
   a) Modify a software defined process;  
   b) Change the software defined process;  
   c) Tailor a software defined process;  
   d) Align a software defined process to hardware;
2. Software engineering principles:  
   a) Commit to quality and continuous improvement;  
   b) Require the use of software tools;  
   c) Focus on activities to construct software;  
   d) Set goals and objectives for managers.
3. The most important skill in software engineering is:  
   a) Software construction;  
   b) Software design;  
   c) Software project management;  
   d) Software quality assurance.
4. The knowledge and skills of workers are:  
   a) Major assets to the business;  
   b) Minor assets to the business  
   c) Irrelevant to the business;  
   d) Not directly impact to the business;
5. To be fully institutionalized a software process must be;  
   a) Defined, Documented, Trained, Used, Measured, Verified, and Improved;  
   b) Documented, Trained, Designed, Measured and Implemented;  
   c) Required, Designed, Programmed, Tested, Released and Maintained  
   d) Designed, Constructed, Trained, Verified and Measured;
6. Identify the correct statement: “Software engineers shall

a. act in a manner that is in the best interests of his expertise and favour.

b. act consistently with the public interest.

c. ensure that their products only meet the SRS.

d. None of the above

1. Select the incorrect statement:

Software engineers should\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. not knowingly accept work that is outside your competence.

b. not use your technical skills to misuse other people’s computers.

c. be dependent on their colleagues.

d. maintain integrity and independence in their professional judgment.

8) What are the signs that a software project is in trouble?

a. The product scope is poorly defined.

b. Deadlines are unrealistic.

c. Changes are managed poorly.

d. All of the above.

9) You are working as a project manager. Your Company wants to develop a project. You are also involved in planning team. What will be your first step in project planning?

a. Establish the objectives and scope of the product.

b. Determine the project constraints.

c. Select the team.

d. None of the above.

10) What is the main aim of Software engineering?

a. Reliable software

b. Cost effective software

c. Reliable and cost effective software

d. None of the above

11) Which of the following is/are considered stakeholder in the software process?

a. Customers

b. End-users

c. Project managers

d. All of the above

12) The work associated with software engineering can be categorized into three generic phases, regardless of application area, project size, or complexity namely the\_\_\_\_\_\_\_\_\_\_ phase which focuses on what, the\_\_\_\_\_\_\_\_\_ phase which focuses on how and the\_\_\_\_\_\_\_\_\_ phase which focuses on change.

1) support, 2) development 3) definition

a. 1, 2, 3

b. 2, 1, 3

c. 3, 2, 1

d. 3, 1, 2

**Software Process**

1) What is a software process?

Process is a set of activities, methods, and practices that are used in the development of software.

2) What is a defined software process?

A Defined process is a set of proven successful processes (best practices) approved for use in an organization to produce quality products on a predictable basis.

A Defined process is also a communication aid to ensure that each team member understands the activities to be carried out in performing the job.

3) What are the fundamental activities of a software process?

Specification, design and implementation,validation and evolution

4) What are the basic software process models?

Requirement, analyze, design, implement , test, maintant

5) What is the principle of Waterfall model ?

Requirement, analyze, design, implement , test, maintant

**Requirement Development**

1. The Requirements continue to be analyzed during software construction is the activity of:  
   a) The Waterfall model;  
   b) The Spiral model;  
   c) The Prototype model;  
   d) The incremental build model;
2. Requirements validation is:  
   a) A technique to find requirements errors after design;  
   b) A method for testing requirements by software tools;  
   c) The process of testing requirements before coding.  
   d) A process to ensure requirements meet customer’s needs;
3. Which of the following is the requirements development sequence?  
   a) Elicitation, Validation, Specification and Analysis;  
   b) Specification, Elicitation, Validation and Analysis;  
   c) Elicitation, Analysis, Specification and Validation;  
   d) Validation, Specification, Analysis and Elicitation;
4. Requirement development process is:  
   a) Sequential process.  
   b) Iterative process  
   c) Skipping process ;  
   d) None of the above.
5. Requirements Engineering is a Software Engineering discipline that focuses on:  
   a) The engineering of requirements;  
   b) The requirements for engineering disciplines;  
   c) The requirements of a computer;  
   d) The discovery, documentation and analysis of the functions to be implemented in software;

**Software Project**

1. Work Breakdown Structure (WBS) is the technique to:  
   a) Define project components;  
   b) Identify project schedule;  
   c) Reduce project costs;  
   d) Improve product quality.
2. The following is NOT a project risks:  
   a) Estimation;  
   b) Technology;  
   c) Programming language;  
   d) People;
3. The project milestone represents:  
   a) A size of the project;  
   b) A product or event of a project;  
   c) A process in the project;  
   d) None of the above.
4. A red color on the stoplight chart means:  
   a) Project must be stopped;  
   b) Project has major issue;  
   c) Project needs money;  
   d) Project financial is in the red.
5. To be successful, project manager must know:  
   a) Project goals;  
   b) Project team;  
   c) Project stakeholders  
   d) All of the above.
6. Risk management must be planned:  
   a) During planning phase;  
   b) During design phase;  
   c) After software construction;  
   d) Before product delivery to customers.
7. A new user-interface is:  
   a) Business risk;  
   b) Technical risk;  
   c) Project risks;  
   d) People risks;
8. Programmers’ skills and experiences are:  
   a) Business risk;  
   b) Technical risk;  
   c) Project risks;  
   d) People risks
9. The cost of software development is:  
   a) Business risk;  
   b) Technical risk;  
   c) Project risks;  
   d) People risks.
10. During planning phase, project manager must:  
    a) Focus on the planning of the project and not worry about risks;  
    b) Ask customers about project risks;  
    c) Identify risks and document them in project plan;  
    d) Discuss risks with programmers;
11. The three types of risks are:  
    a) Financial, hardware, software;  
    b) Management, programmers and customer;  
    c) Project, technical and business;  
    d) Schedule, costs and quality.
12. Risks are events that when happen:  
    a) Cause computer to crash;  
    b) Could put more errors to software product;  
    c) Can change software product;  
    d) Can create problems for project.

**Quality Assurance and Testing**

1. SQA perform reviews in project according to:  
   a) The SQA plan;  
   b) The project plan;  
   c) The Defined process;  
   d) None of the above.
2. Having SQA function can:  
   a) Improve quality and productivity;  
   b) Measure technological trends;  
   c) Predict software estimates;  
   d) All of the above.
3. SQA evaluates processes, products, and services against  
   a) the defined process  
   b) standards  
   c) Procedures  
   d) All of the above.
4. The SQA plan consists of:  
   a) The quality goals and objectives;  
   b) The SQA process and checklists;  
   c) SQA roles and responsibilities;  
   d) All of the above
5. Testing activities must be:  
   a) Plan after coding phase  
   b) Review by managers  
   c) Based on coding logic;  
   d) Plan early in the project
6. Software reviews and inspection can also help:  
   a) Software engineer’s skills;  
   b) Project management’s skills  
   c) Reduce stress  
   d) Communication among team members.
7. Software Process Improvement activities are focusing on :  
   a) Software products;  
   b) Software technology;  
   c) Programming languages;  
   d) Changing the way people build software;
8. The Capability Maturity Model Integration (CMMI) is a framework to:  
   a) Build large and complex software products;  
   b) Improve quality of software products;  
   c) Create more innovations in software products  
   d) Measure software engineers skills of people