SELECTED swe523 EXAM QUESTIONS IN THE PAST YEARS

…….. is not one of the main project management activities.

a. Project planning

b. Risk management,

c. People management,

d. Proposal writing

e. Testing activity

.…………….is not of the main classes of attribute used to compute the multiplier M?

a. Product b. Computer c. Personnel d. Project **e. Business**

List the four main classes of attribute used to compute the multiplier M?

1. Product Attributes
2. Computer Attributes
3. Personnel Attributes
4. Project Attributes

critical path question???

exam question: The slacktimes at the activity C is .....days

In a TEYDEB project, ............... is a technical progress report prepared by company

a. AGY100 b. AGY200 **c. AGY300** d. AGY400 e. AGY350

2-3 NUMERIC QUESTIONS : For example,

A decision tree analysis is one of the powerful techniques for analyzing and quantifying the risks. Assume …. I will give a scenario and ask question ☺

The European Union (EU) project framework program does not include d. Military Technologies.

Here's why the other options are included in the EU framework program:

Early Research Council (ERC): Supports frontier research by individual researchers.

Network Excellence Centers (Networks of Excellence): Funds collaboration between research institutions across Europe.

Marie-Curie Actions: Promotes international mobility of researchers at all career stages.

FET Flagships: Supports large-scale, long-term research initiatives addressing societal challenges.

The EU focuses on civilian research and innovation

**List the five sections Humphrey suggests should be included in a quality plan:**

a. **Introduction:** Project overview and quality goals.

b. **Standards and Procedures:** References to relevant quality standards and development procedures.

c. **Reviews and Audits:** Plans for conducting code reviews, inspections, and quality audits.

d. **Tools and Techniques:** Description of tools and techniques used for quality control, such as testing methodologies.

e. **Training:** Training plans for developers and testers on quality practices.

f. **Responsibilities:** Roles and responsibilities for quality management activities.

**Six additional possible risks that could arise in software projects:**

1. **Communication breakdowns:** Miscommunication between stakeholders (clients, developers, etc.) can lead to misunderstandings about requirements, deadlines, or functionalities.
2. **Third-party dependency issues:** Delays or problems with external libraries, frameworks, or services can impact project timelines and functionality.
3. **Data security vulnerabilities:** Unidentified or unaddressed security flaws can expose sensitive data or compromise system integrity.
4. **Scope creep without proper change management:** Uncontrolled addition of new features or functionalities can lead to schedule delays, budget overruns, and potential quality issues.
5. **Infrastructure limitations:** Insufficient hardware, software, or network capacity can hinder development, testing, or deployment of the software.
6. **Integration challenges:** Difficulty integrating different software components or systems can cause unexpected issues and delays.

These are just a few examples, and the specific risks will vary depending on the nature and complexity of the software project.

Fixed-price contracts, where the contractor bids a fixed price to complete a system development, may be used to move project risk from client to contractor. If anything goes wrong, the contractor has to pay. Suggest how the use of such contracts may increase the likelihood that product risks will arise.

Under what circumstances might a company justifiably charge a much higher price for a software system than the software cost estimate plus a reasonable profit margin?

Cost estimates are inherently risky, irrespective of the estimation technique used. Suggest four ways in which the risk in a cost estimate can be reduced.

Figure sets out a number of tasks, their durations and their dependencies. Draw a bar chart showing the project schedule. ...find ....

Explain how standards may be used to capture organizational wisdom about effective methods of software development. Suggest four types of knowledge that might be captured in organizational standards.

Describe 4 major factors that should be taken into account by engineers during the process of building a release of a large software system.

Describe 4 essential features that should be included in a tool to support change management processes.

Describe the 3 major difficulties that may arise when building a system from its components. What particular problems might occur when a system is built on a host computer for some target machine?

Describe three types of software process metric that may be collected as part of a process improvement process. Give one example of each type of metric.

Under what circumstances would you recommend the use of the staged representation of the CMMI?

What are the identified levels in the CMMI staged model

The CMMI staged model defines five levels of process maturity:

Initial: Processes are informal and reactive.

Repeatable: Basic project management practices are established to ensure consistent project performance.

Defined: Processes are documented and standardized across the organization.

Managed: Process performance is measured and controlled.

Optimizing: Continuous process improvement is a focus based on quantitative data.

By progressing through these levels, organizations can achieve higher levels of process maturity, leading to improved software quality, reduced development costs, and faster time-to-market.

Selected other questions

**Chapter 22: Project management**

1. What are important differences between software project management and other types of project management?

2. List 4 fundamental project management activities.

3. What are three related categories of risk?

4. Suggest 4 risks that may threaten the success of a software project?

5. Give 2 examples of technology risks that may arise in a software project.

6. What is involved in risk monitoring?

7. What are the four critical factors in people management?

8. What are the different levels in the human needs hierarchy?

9. What factors might be considered when selecting people for a software development team?

10. What are the key factors that influence the effectiveness of group communications?

**Chapter 23: Planning and estimation Your name:**

1. What estimates have to be produced by software project managers?

2. What factors should be considered when deciding on a price for software?

3. What is included in a quality plan and a validation plan?

4. What are the principal activities in the project scheduling process?

5. How are bar charts used in project scheduling?

6. What are the most important differences between agile planning and plan-based development?

7. Briefly describe two types of cost estimation techniques?

8. What is the generic formula used in algorithmic cost modelling to compute the effort required to develop some software?

9. What are the estimation models used in COCOMO II.?

10. What are the four classes of attribute used to compute the multiplier M?

**Chapter 24: Quality management**

1. What are the three main quality management activities?

2. What sections does Humphrey suggest should be included in a quality plan?

3. Briefly describe the two types of standard that may be defined during the quality management process?

4. What is ISO 9001 and what does it describe?

5. What are the stages in the software inspection process?

6. List the classes of faults that should be considered in an inspection checklist?

7. Describe two ways in which software product measurements may be used.

8. Why are software metrics not more widely used in industry?

9. What are the key stages in the product measurement process?

10. What are the object-oriented metrics used in the CK OO metrics suite.

**chapter25-config. management**

2. What is a baseline?

3. What are the objectives of the change management process?

5. What features are normally provided by version management systems?

6. How are deltas used in a storage management system that is part of a version management system?

7. Briefly describe the 3 different platforms that may be involved in a system building process?

8. What are the two types of signature that may be used to relate source code files and their equivalent object code in a build system?

9. What is the difference between a system version and a system release?

10. What may be included in a system release?

**chapter 26- rpocess improvement**

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

2. What are the main factors that affect software product quality?

3. List the process characteristics that you may try to improve?

5. Briefly describe the GQM paradigm?

6. What are the objectives of process analysis?

7. What is shown in a process model?

8. What are the essential stages in the process change process?

9. What are the process area categories used in the CMMI model?

10. What are the identified levels in the CMMI staged model?