SPM THEORY QUESTIONS FROM THE PAST PAPERS

True/False

1. In architecting a new software program, all the serious mistakes are made on the first day. (T/F)
2. Projects are typically part of an organization that is smaller than the project. (T/F)
3. Project risk management includes the contract management and change control processes required to administer contracts or purchase orders issued by authorized project team members. **FALSE**
4. Cost and Staffing Levels are low at start, Peak during the intermediate phases and drop rapidly as the project draws to a conclusion. **TRUE**
5. Project management is the application of knowledge, skills, tools and techniques to project activities to meet the project requirements. **TRUE**
6. Project Plan is how part and project management plan is what part of the project. **FALSE**
7. The phases of a project life cycle are the same as the Project Management Process Groups. **FALSE**
8. A connected sequence of activities leading from the starting event to the ending event which is longest in time is called critical path through the network. **TRUE**
9. Process WBS is entity Oriented where the WBS is activity Oriented. **FALSE**
10. A Task is a generic term for work that is not included in the WBS, but potentially could be a further decomposition of work by individuals responsible for that work. Also the lowest level of effort on a project. **TRUE**

11. A Program is a unique, goal oriented, time-bound, and constrained undertaking. **FALSE**
12. Programs have few things in common, which include objectives, Start and End, Points (dates etc), uniqueness, constraints and temporary nature. **FALSE**
13. Operations are ongoing and repetitive, sustain the business, and they adopt a new set of objectives and the work continues. **TRUE**
14. Project Management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. **TRUE**
15. A Portfolio is a large endeavor, encompassing a broad goal which can be composed of a number of projects. **FALSE**

Fill in the Blanks

1. The project Lifecycle defines __**Phases**__ that connect the beginning of a project to its end.
2. The __**Project Charter**__ is a document that formally recognizes the existence of a project. It describes the product to be delivered and addresses the business need of the Project.
3. Difference between Late Start and Early Start or Late Finish and Early Finish is called _**Slack/Float**_____.
4. Phases are generally __**Sequential**__ and are usually defined by some form of technical information transfer or technical component handoff.
5. The Duration time for each of a Project's activities in a PERT Environment are estimated on the basis of _**Optimist**__ , ___**Pessimist**_____ and ___**Most Likely**__ completion time.
6. _____**Traceability**_ provides a methodical and controlled processes for managing the changes that inevitably occur during the application development.

7. __**Project Lifecycle**__ starts with the business plan, thorough ideas, to product, to ongoing operations.

8. The ability of __**The Stakeholders**__ to influence the final characteristics of the Project's product and the final cost of the Project is highest at the start and gets progressively lower as the project continues.

9. The Phases of a project __**Life Cycle**__ are not the same as the Project Management process Groups.

10. The __**Level of UNcertainity**__ is highest and risk of failing to achieve the objectives is greatest at the start of project. The certainty of completion generally gets progressively better as the project continues.

11. Project __**Stakeholders**__ are actively involved in the project or whose interests may be affected as a result of project execution or project completion.

12. A __**deliverable**__ is a measurable, verifiable work product.

13. __**Process**__ WBS is activity oriented whereas __**Product**__ WBS is entity oriented.

Q1: What is a Change Request?

A Change Request is a formally submitted artifact that is used to track all the stake-holders requests with related status information throughout the project lifecycle.

A change request may include:

1) New Features

2) Enhancements Requests.

3) Defects

4) Changed Requirements.

Q2: What is CCB?

1. CCB stands for Change/Configuration Control Board.

2. CCB is a board that oversees the change process.

3. It is consist up of representatives from all interested parties like:

  a) Customers,

  b) Developers,

  c) Users

4. In a small project such as single team member such as the Project Manager or Software Architect may play this role.

Q3: What is a Baseline?

1. A Baseline is an SCM Concept that helps the practitioners to control change without seriously impeding justifiable change.

2. IEEE Definition: A specification or product that has been formally reviewed and agreed upon, and that thereafter serves as the basis for further development, and that can be changed only through formal change control procedures

3. It is the milestone in the development of software and is marked by the delivery of one or more computer software configuration items that have been approved because of a formal technical review.

4. A computer software configuration items may be such work products such as a document, a test suite, or a software component.

Q4: What are Ingredients of Estimation by Analogy Technique?

It is Experience-based Estimates

The cost of a project is computed by comparing the project to a similar project in the same application domain

Advantages: Accurate if project data available

Disadvantages: Impossible if no comparable project has been tackled. Needs systematically maintained cost database.

Q5: What is the difference in between Fast Tracking and Crashing?

Sno	Fast Tracking	Crashing
1	Activities or phases are performed in parallel to compress the schedule	More resources are added to the activities or phases to compress the schedule
2	Increases rework and risk	Increases cost and can result in increased risk/cost too
3	Works only when activities/phases can be overlapped to shorten the project duration	Works only for activities where additional resources will shorten the activity's duration
4	Always tried first	Always tried when fast tracking hasn't given required compression in schedule
5	Applied on critical path activities. If not it will only add to float	Applied on critical path activities. If not it will only add to float

Q5: What is the difference in between Project and Program?

Project	Program
A project refers to a specific, singular endeavor to deliver a tangible output.	A program refers to multiple projects which are managed and delivered as a single package.
The scope and goals of a project are well-defined	while programs are typically less clear-cut
Projects focus on achieving tangible outputs, i.e., what you gain upon completing the project.	Programs focus on outcomes – which are often not tangible.
Project Managers need to focus on the deliverables of their project which must be achieved within certain cost and time constraints.	**Program Managers** must be comfortable in being less hands-on and they need to have a vision of the benefits the program will achieve

What is Product Backlog?

- Product Backlog is one of the SCRUM Artifact.
- It is the list of all desired work in the project.
- It is usually a combination of: Story based work () and Task Based Work ()
- List of all desired work is prioritized by the product owner which can be a product manager, Marketing or internal customer.
- Requirements of the system is expressed as a prioritized list of backlog items.
- It is managed and owned by the product owner.
- Typically managed by the Spreadsheet.
- It is usually created in Sprint Planning meeting.
- Can be changed and re-prioritized before each Product Manager.

What is Sprint Backlog?

- Sprint Backlog is a subset of Product Backlog Items, which define the work for a Sprint
- It is created ONLY by Team members
- Each Item has it's own status
- Should be updated every day
- No more than 300 tasks in the list
- If a task requires more than 16 hours, It should be broken down
- Team can add or subtract items from the list.
- Product Owner is not allowed to do it

What are Burndown Charts?

Burndown chart displays the remaining effort for a given period.

When they track product development using the Burndown chart, teams can use a sprint Burndown chart and a release Burndown chart.

• **Sprint Burndown Chart**

– Teams use the sprint Burndown chart to track the product development effort remaining in a sprint.

– General speaking the Burndown chart should consist of:

• X axis to display working days

• Y axis to display remaining effort

• Ideal effort as a guideline

• Real progress of effort

• **Release Burndown Chart**

Will the release be done on right time?

• X-axis: sprints

• Y-axis: amount of hours remaining

• The estimated work remaining can also burn up.

What is the difference in between PMI, PRINCE2 and SCRUM.

PMP	Prince2	Scrum
• PMP is a standard	• PRINCE2 is a methodology	• Scrum/Agile is a framework.
• Standard means best practices. • They are neither legally binding nor you are forced to adopt them.	• Methodology means doing something step by step. • This is what Prince2 essentially about i.e. it lists down steps to perform to do project management unlike PMP.	• Framework means a base on which you can build something. • That's why you will see that based on Scrum framework there are numerous certifications being offered. One of them is offered by PMI which is called PMI-ACP (Agile Certified Practitioner). And then there are some others too such as Scrum Alliance and Scrum Council.
• It simply means that based on experiences from all over the world, a standard has been made which if you apply in your situation, will bring favourable results. But it doesn't mean there is 100% guarantee that they will always bring	• It tells you what to do first, then second and so on. Although you may see that PMP has also got steps but essentially they are not and neither they are performed in particular order in strict sense.	• Framework provides you with boundary or blue print of what is included in it and then you can extend on it. All of these certifications above have their own course outline and structure even though they are

favourable results to you.		based on same framework.
• If you open the first page of PMBOK (the page after trademarks and logos) which has title "Notice", you will see it states exactly that. Here are some excerpts from that page. The Project Management Institute, Inc. (PMI) standards and guidelines publications, of which the document contained herein is one, are developed through a voluntary consensus standards development process	• Here is a quote from Wikipedia. PRINCE2 is a process-driven project management method which contrasts with reactive/adaptive methods such as Scrum.	

It can be said that project management itself is a framework on which all these certifications, PMP, PRINCE2 and Scrum/Agile are based.

What are Ingredients of Configuration Management in a Software House?
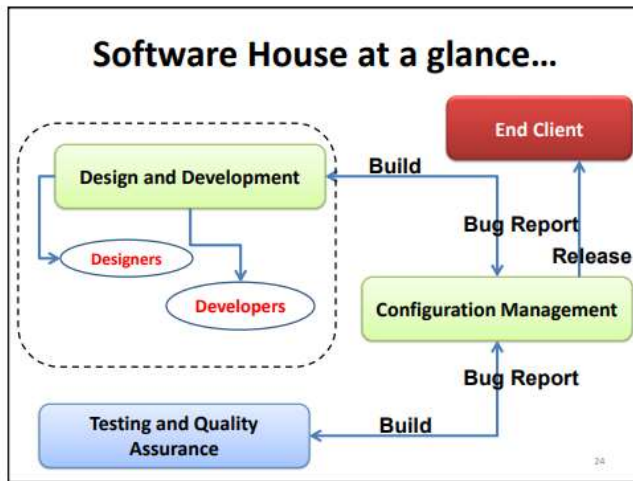
Configuration elements

A set of tools coupled with a file management (e.g., database) system that enables access to and management of each software configuration item

Process elements

A collection of procedures and tasks that define an effective approach to change management for all participants
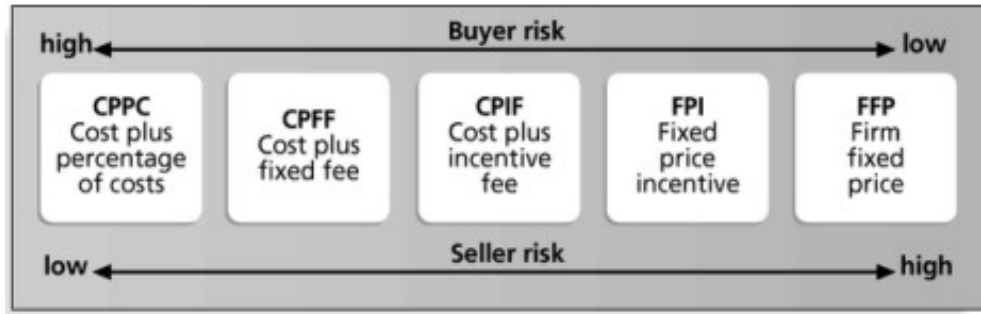
Construction elements

A set of tools that automate the construction of software by ensuring that the proper set of valid components (i.e., the correct version) is assembled.

Human elements

A set of tools and process features used by a software team to implement effective SCM

Please Explain the Following Figure:

This figure shows the Contract Types Versus the Risk.

What is the difference in between Risk Exposure and Opportunity Exposure?

Risk Exposure:

Risk Exposure calculates the effective current cost of a risk and it can be used to prioritize risk that requires countermeasures.

Risk Exposure, RE= Probability of risk occurring x Total loss if risk occurs.

Highest Risk Exposure indicates most serious risk.

Opportunity Exposure:

Opportunity Exposure, OE= P(Gain) * S(Gain)= Expected Value.

Buying information and the other Risk strategies have their Opportunity counterparts.

P(Gain): Are we likely to get there before the competition?

S(Gain): How Big is the Market for the solution?