

**714** KEY CONCEPTS  
FOR THE NEW **2021** PMP EXAM

# **PERFECT PMP® EXAM FLASHCARDS**

**INCLUDES: WATERFALL & AGILE PROJECT MANAGEMENT**

**PLUS BONUS VIDEO LESSONS & LIVE COACHING CALL**

 **PM** Master Prep

**Scott Payne, PMP**

# **These Flashcards Are Aligned to the PMP Exam Content Outline.**

*To ace the exam, you must have a strong understanding of both Waterfall and Agile Project Management.*

The Cards are 50% Waterfall and 50% Agile

## But.. What About PMI's New Domains?

People	}	<b>50% Waterfall</b>
Process		
Business		<b>50% Agile</b>
Environment		

*All of the content in the new domains is more easily learned by mastering the core Agile and Waterfall methodologies. At the time of printing, our success record on the new exam is 111 for 113 students (98.23%). This make learning easier.*

# **WATERFALL PROJECT MANAGEMENT**

**INITIATING**

**Project success measures define in clear terms the criteria by which project success will be evaluated. What three questions do detailed and well-constructed project success measures answer?**

**What does success look like?**

**How will success be measured?**

**What factors may impact success?**

**What is the term for an individual who is involved with and/or impacted (positively or negatively) by a project?**



# **Stakeholder**

**A stakeholder is any person who  
is involved with or impacted  
by the project.**

What is the definition of a project?

- A) Permanent endeavor that produces repetitive outputs
- B) Temporary endeavor undertaken to create a unique product, service, or result
- C) Temporary endeavor that produces repetitive outputs
- D) Temporary endeavor undertaken to create a temporary business process or product

**B) Temporary endeavor  
undertaken to create a unique  
product, service, or result**

**Name the two processes in the  
Initiating Process Group.**

# **Develop Project Charter and Identify Stakeholders**

**Which document describes the necessary information to determine if a project is worth the required investment?**

- A) Service level agreement**
- B) Cost baseline**
- C) Memorandum of understanding**
- D) Business case**

## **D) Business case**

Who is the person assigned by the performing organization to be responsible for achieving the project's objectives?

- A) Program manager
- B) Project manager
- C) Functional manager
- D) Portfolio manager



## **B) Project manager**

Power, urgency, and legitimacy are attributes of which stakeholder classification model?

- A) Salience
- B) Influence-impact
- C) Power-interest
- D) Power-influence

# **A) Salience**

**True or False:**

**Without approval from the project sponsor, there is no project.**

INITIATING

**True**

**True or False:**

**The business case is used to record all assumptions and constraints known at any point during the project.**

# **False**

**The assumption log is used to record all assumptions.**

**True or False:**

**It is critical to identify all stakeholders as early as possible.**



INITIATING

**True**

**True or False:**

**The stakeholder register is rarely updated throughout the life of a project.**

# False

The stakeholder register is updated often as new stakeholder information is discovered.

**What is the definition of  
the project charter?**

**A project charter formally documents the high-level details of a project as well as several key elements that structure and organize the formation of a project.**

**What is the assumption log and in which process is it created?**

**The assumption log is used to record all assumptions and constraints known at any point during the project. The assumption log is one of the two major outputs of the Develop Project Charter process.**

**What is the stakeholder register and in which process is it created?**



**The stakeholder register is a document used to record pertinent information on every stakeholder, including each stakeholder's function, title, level of interest in the project, and level of influence. The stakeholder register is created during the Identify Stakeholders process.**

**What is the difference between a project charter and a business case?**

**The project charter formally documents the high-level details of a project and, after approval by the sponsor, formally authorizes the project.**

**The business case helps define the objectives, purpose, and assumptions of a project. It's used prior to starting a project to determine if the benefits of achieving the objectives are worth the investment.**

**Which of the following is not a goal of the Initiating Process Group?**

- A) Define the project**
- B) Obtain project approval**
- C) Define the scope**
- D) Identify and start to understand the stakeholders**

## **C) Define the scope**

**The scope is defined in the Planning  
Process Group.**

**What is the main goal of the Develop Project Charter (4.1) process?**

**The Develop Project Charter process focuses on developing and gaining sponsor approval of the project charter.**

**What is the main goal of the Identify Stakeholders (13.1) process?**



**The Identify Stakeholders process identifies, analyzes, and classifies all stakeholders that could impact, or be impacted by, the project.**

**Which of the following is not an input to the Develop Project Charter process (4.1)?**

- A) Business case**
- B) Project management plan**
- C) Agreements**
- D) EEFs and OPAs**

# **B) Project management plan**

**Early in the project, what are two important inputs to identify stakeholders?**

# **Project charter and business case**

Stakeholder \_\_\_\_\_ and  
\_\_\_\_\_ helps the team  
design ways to appropriately engage  
each stakeholder.

# **Identification and analysis**

Which of the following is a method of eliciting information from groups or individuals, such as team members or subject matter experts?

- A) Brainstorming
- B) Data analysis
- C) Bidder conference
- D) EEF



# **A) Brainstorming**

**What is a mapping technique used to identify where stakeholders are perceived to be relative to their power and interest in the project?**

# **Power-interest grid**

**How should stakeholders with high power and high interest be classified and managed?**

**High-powered and high-interest stakeholders should be managed closely.**

# PLANNING

List the following processes in the order in which they should be completed:

- Create WBS
- Collect Requirements
- Plan Scope Management
- Define Scope

**Although iterative, the general order is as follows:**

- 1) Plan Scope Management**
- 2) Define Scope**
- 3) Collect Requirements**
- 4) Create WBS**



A project \_\_\_\_\_ meeting  
is a common practice to clearly  
communicate project objectives and  
build team and stakeholder buy-in.

# Kick-off

**What is the major output created by the four scope management processes in the Planning Process Group?**

# Scope baseline

\_\_\_\_\_ defines all the necessary work that is required to complete the project.

# **Project scope**

A \_\_\_\_\_ is a condition or capability that must be present in the finished product to satisfy a business need.

# Requirement



**Why is the Collect Requirements (5.2) process completed before the Define Scope (5.3) process?**

**The Collect Requirements process transforms high-level requirements into clear objectives required to define the scope of the project.**

**What is the difference between requirements documentation and requirements traceability matrix?**

**The requirements documentation serves to clearly define all potential project requirements needed for creating the scope baseline.**

**The requirements traceability matrix organizes and presents the requirements in a visual manner that links each requirement to the individual deliverables that satisfy it.**

A trained facilitator is often used in the \_\_\_\_\_ process to obtain requirements from stakeholders and others with expert judgement.

# **Collect Requirements**

**What is the definition of an affinity diagram?**

**An affinity diagram  
classifies requirements into  
distinct groups for review  
and analysis.**



\_\_\_\_\_ a model of the potential product and providing it for review can be a fast and inexpensive method for obtaining feedback on requirements.

# Prototyping

**A well-defined scope statement  
creates clear boundaries, reducing**

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# Scope creep

# What is the project scope statement?

**The project scope statement is a detailed definition of the project and product scope, major deliverables, assumptions, and constraints. The statement clearly defines what is and is not in the project scope.**

**Three documents comprise the  
scope baseline:**

\_\_\_\_\_ , \_\_\_\_\_ ,  
\_\_\_\_\_

- **Scope statement**
- **Work breakdown structure (WBS)**
- **WBS dictionary**



List the following processes in the order in which they should be completed:

- Define Activities
- Plan Schedule Management
- Sequence Activities
- Develop Schedule
- Estimate Activity Durations

- 1) Plan Schedule Management**
- 2) Define Activities**
- 3) Sequence Activities**
- 4) Estimate Activity Durations**
- 5) Develop Schedule**

The \_\_\_\_\_ process describes the actions that deliver the deliverables created by the Create WBS (5.4) process.

# **Define Activities**

An \_\_\_\_\_ is a distinct,  
scheduled portion of work to  
be performed.

# Activity

\_\_\_\_\_ moves a successor  
LEFT (earlier); \_\_\_\_\_  
moves a successor RIGHT (later).

**Lead;  
lag**



\_\_\_\_\_ are calculated in terms of the number of work periods needed to complete an activity.

# **Duration estimates**

Which of the following estimating techniques is less costly and time consuming, but also the least accurate?

- A) Parametric estimating
- B) Analogous estimating
- C) Bottom-up estimating
- D) Three-point estimating

## **B) Analogous estimating**

**Analogous estimating uses historical data from similar projects to produce a gross value estimate for a project's activity duration.**

Which of the following estimating techniques uses a statistical or numerical relationship to calculate activity durations?

- A) Parametric estimating
- B) Analogous estimating
- C) Bottom-up estimating
- D) Three-point estimating

# **A) Parametric estimating**

\_\_\_\_\_ estimating requires significant resources and time, but can be very accurate.

# **Bottom-up estimating**

**This technique aggregates estimates of individual lower-level activities.**



Which of the following estimating techniques uses the triangular distribution mathematical equation to incorporate risk and uncertainty into the estimate?

- A) Bottom-up estimating
- B) Parametric estimating
- C) Three-point estimating
- D) Analogous estimating

## **C) Three-point estimating**

**What's the difference between  
contingency reserves and  
management reserves?**

**Contingency reserves address known-unknowns (for example, the project manager expects rework but the exact amount is unknown).**

**Management reserves address unknown-unknowns (unforeseen work).**

When creating the cost baseline in the Determine Budget process, \_\_\_\_\_ reserves are included in the baseline, but \_\_\_\_\_ reserves are not included.

# **Contingency; management**

**After the time, scope, and cost baselines are defined within the project management plan, all future changes can be made only through the \_\_\_\_\_ process.**

**Perform Integrated Change  
Control process (included  
in the Monitoring and  
Controlling Process Group)**



List the following processes in the order in which they should be completed:

- Identify Risks
- Plan Risk Management
- Perform Qualitative Risk Analysis
- Plan Risk Responses
- Perform Quantitative Risk Analysis

- 1) Plan Risk Management**
- 2) Identify Risks**
- 3) Perform Qualitative Risk Analysis**
- 4) Perform Quantitative Risk Analysis**
- 5) Plan Risk Responses**

**Which document visually translates the project deliverables into small, manageable components?**

# **Work breakdown structure (WBS)**

**What is the definition of  
a requirement?**

**A requirement is a condition/  
capability that must be present  
in the finished product to satisfy  
a business need.**

# What is scope creep?

**Scope creep is the expansion of project work beyond the project boundaries.**



**What is the one key output of the Define Scope process?**

# **Project scope statement**

**The project scope statement provides a detailed definition of the project and product scope, major deliverables, assumptions, and constraints.**

**True or False:**

**"Work" refers to the deliverables produced, not the activities that produce the deliverables.**

# True

Using an example of a project to dig a long ditch, the work would be defined as the completed ditch, not the activities required to dig the ditch.

**Name the technique used to create the WBS by subdividing the scope into progressively smaller, more manageable parts.**

# Decomposition

**Define a work package.**

**A work package is the lowest level of the WBS. It is the smallest amount of work for which cost and duration can be estimated and managed.**



**The schedule management processes in the Planning Process Group progressively translate the \_\_\_\_\_ of the scope baseline into a logically sequenced work schedule.**

# **Deliverables**

**What are the three key outputs  
produced by the Define  
Activities process?**

# **Activity list, activity attributes, and milestone list**

# What is the definition of an activity?

**An activity is a distinct,  
scheduled portion of work  
to be performed.**

\_\_\_\_\_ extend the description of activities defined in the activity list, providing details on the effort type and work location.

# **Activity attributes**

**Activity attributes evolve and deepen in description as the project progresses.**



The \_\_\_\_\_ document frames the schedule constraints impacting the project.

# Milestone list

The milestone list is created as an output of the Define Activities process. The defined milestones identify significant points/events that are used in creating the detailed schedule.

The \_\_\_\_\_ process aims to organize the activities into a schedule network diagram that graphically shows the order in which work will be completed.

# **Sequence Activities**

**What is the key output produced by the Sequence Activity process?**

# **Project schedule network diagram**

The project schedule network diagram shows the logical relationships of all activities from start to finish.

The \_\_\_\_\_ process brings depth and perspective to the network diagram by defining the amount of effort and resources each activity demands.

# **Estimate Activity Durations**



The \_\_\_\_\_ is the approved version of the schedule model used to evaluate actual vs. planned progress throughout the project.

# **Schedule baseline**

**True or False:**

**All project baselines must be approved by the project sponsor.**

# **True**

**All project baselines must be approved by the project sponsor.**

**What is the difference between crashing activities and fast tracking activities?**

**Crashing refers to the addition of resources to reduce the time required to complete an activity.**

**Fast tracking refers to the reorganization of sequential activities into parallel activities to reduce the time required to complete the activities.**

**What is the largest negative impact of crashing that must be evaluated and accounted for?**

# **Additional cost**



The \_\_\_\_\_ explains the logic behind each cost estimate, allowing the team to understand how the costs were derived.

# **Basis of estimates**

**The Determine Budget process creates the project's budget and baseline by \_\_\_\_\_ the cost estimates into a time-phased view.**

# Aggregating

**True or False:**

**The project budget and cost baseline are different.**

# **True**

**The project budget includes the management reserve; the cost baseline does not.**

**Which type of reserve accounts  
for identified risks?**

**The contingency reserve accounts for identified risks. In comparison, the management reserve accounts for unplanned work.**



The cost of preventing mistakes is \_\_\_\_\_ than the cost of correcting mistakes found by inspection or use.

**Less**

The \_\_\_\_\_ describes the activities and resources necessary for the project team to achieve the project's quality objectives.

# **Quality management plan**

**The quality management plan also defines procedures for addressing nonconformance, corrective actions, and continuous improvement.**

**What two components comprise the cost of quality?**

# **Cost of conformance and cost of nonconformance**

**The cost of conformance includes  
what two types of costs?**

# **Prevention and appraisal costs**

**Prevention costs are those associated with building quality into a product (training, equipment, etc).**

**Appraisal costs are those associated with assessing the quality (testing, destructive testing loss, inspection).**



**True or False:**

**The cost of quality (COQ) only considers the cost incurred while completing the project's physical work.**

# **False**

**The cost of quality includes all quality-related costs over the entire life of the project.**

**What is the difference between the project charter and team charter?**

**The project charter is the foundational document that authorizes the existence of the project. The team charter defines the team's agreed-upon operating guidelines.**

The \_\_\_\_\_ organizes the resource estimates into a hierarchical chart that can be used to help acquire and monitor resources.

# **Resource breakdown structure**

**Throughout the Resource Estimating process, various options must be evaluated to determine the optimal resource solution given the project's constraints. Which data analysis technique does this describe?**

# **Alternative analysis**



**Define the steps in a basic sender-receiver communications model.**

# **Encode, transmit, decode**

**Encode** = Message put in text/sound  
for transmission

**Transmit** = Message sent via  
communication channel

**Decode** = Data translated by receiver  
into a usable form

**Name the three most common communication methods.**

# **Interactive, push, pull**

**Interactive** = Multidirectional  
communication

**Push** = Sent to specific recipients,  
but no confirmation that the  
information is understood

**Pull** = Allows content access at  
the user's own discretion

\_\_\_\_\_ is anything  
compromising the understanding of  
a communicated message.

# Noise

Noise can be caused by a receiver being distracted or lacking adequate perception and/or knowledge.

**What is the equation for calculating communication channels?**

$$\text{Communication channels} \\ = N \times (N - 1) / 2$$

**N = number of stakeholders**



List the following processes in the order in which they should be completed:

- Plan Risk Management
- Plan Risk Responses
- Perform Qualitative Risk Analysis
- Identify Risks
- Perform Quantitative Risk Analysis

**The risk management processes in the Planning Process Group are completed as follows:**

- 1) Plan Risk Management**
- 2) Identify Risks**
- 3) Perform Qualitative Risk Analysis**
- 4) Perform Quantitative Risk Analysis**
- 5) Plan Risk Responses**

**Which document is created during the Identify Risks process to record specific details on every individual project risk?**

# **Risk register**

**The risk register is a key output of the Identify Risk process.**

**What are the two key outputs of the Identify Risks process?**

# **Risk register and risk report**

**True or False (and Why?):**

**Once created, the risk register and risk report are not adjusted.**

# False

**The risk register and risk report are continually adjusted to deepen the understanding of the current risk profile and to include additional risks identified.**



**What factors are used to evaluate each risk on the risk register during the Qualitative Risk Analysis process?**

# **Perception of probability of occurrence and impact**

**Qualitative risk analysis is subjective, as it based on perception of each risk's probability of occurrence and impact.**

**An S-curve is produced by which type of risk analysis?**

# **Monte Carlo analysis**

**The S-curve from a Monte Carlo risk analysis visually shows the probability of achieving any project outcome.**

**What is purpose of a  
tornado diagram?**

**The tornado diagram (used in 11.4 Perform Quantitative Risk Analysis) determines which individual risk has the greatest potential impact by correlating variations in project outcomes to individual risks.**

**Which analysis method is used to select the best of several alternative courses of action?**

# Decision tree analysis

Decision tree analysis is a mathematical method in which alternate decision paths are shown and evaluated for their overall expected monetary value. The net path value is calculated for each and the decision path with the best value is selected.



**Which of the following is not a desired characteristic of a proper risk response plan?**

- A) Appropriate**
- B) Cost-effective**
- C) Timely**
- D) Realistic**

## **C) Timely**

**Risk response plans should be appropriate, cost-effective, and realistic.**

**What are the five alternative risk strategies that must be considered when planning for threats?**

- A) Escalate, avoid, transfer, mitigate, accept**
- B) Escalate, avoid, expedite, mitigate, accept**
- C) Escalate, exploit, share, enhance, accept**
- D) Escalate, exploit, transfer, enhance, accept**

**A) Escalate, avoid, transfer,  
mitigate, accept**

**Which output produced in the Plan Procurements Management process defines the procurement need in detail sufficient to allow the sellers to assess if they are capable of providing the work?**

# **Procurement statement of work**

**Which type of contract is used when the scope of work is expected to change significantly during the project?**

# **Cost-reimbursable contract**

**The seller is reimbursed for all allowable costs (per contract).**



**Which documents produced as outputs of the Plan Procurement Management process must not be provided to the potential sellers?**

# **Source selection criteria and independent cost estimates**

**Source selection criteria provide an objective means to evaluate each proposal in order to select the seller offering the greatest overall value. Independent cost estimates provide a frame of reference for evaluating bids submitted. These documents are for internal project team use only!**

**The stakeholder engagement matrix is used to visually compare which two levels of stakeholder engagement?**

# **Current vs. desired engagement**

**EXECUTING**

**The Direct and Manage Project  
Work process ensures both  
the planned project work and  
\_\_\_\_\_ are executed.**

# **Approved change requests**

**Both planned project work and approved change requests are inputs to the Direct and Manage Project Work process.**

**The deliverables produced by the Direct and Manage Project Work process are evaluated to confirm they meet quality standards during which process?**



# Control Quality

**The Direct and Manage Project Work process is where the “rubber meets the road” as the team executes the \_\_\_\_\_ defined in the project plans.**

# **Planned project activities**

**What are the raw observations/  
measurements produced as an  
output of the Direct and Manage  
Project Work process?**

# **Work performance data**

**Work performance data are passed onto the processes in the Monitor and Control Process Group for analysis. Through analysis, the data are converted into work performance information.**

**When a change request is approved in the Perform Integrated Change Control process, it flows back to the \_\_\_\_\_ process as an input.**

# **Direct and Manage Project Work**

**Which output document should the project team use to record problems, gaps, inconsistencies, and conflicts that occur during the Direct and Manage Project Work process?**



# Issue log

**Throughout the entire project, both best practices and problems must be codified and recorded on the**

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# **Lessons learned register**

**The \_\_\_\_\_ process translates the quality management plan into executable activities that integrate quality policies into the project.**

# **Manage Quality process**

**Which data representation technique used in the Manage Quality process breaks down the causes of a problem and organizes them into discrete branches, allowing root cause identification?**

- A) Flow chart**
- B) Cause-and-effect diagram**
- C) Affinity diagram**
- D) Scatter diagram**

# **Cause-and-effect diagram**

**The cause-and-effect diagram is also known as the fishbone or Ishikawa diagram.**

**True or False:**

**The scatter diagram graphically shows the relationship between two variables.**



# True

**The scatter diagram is a tool and technique used in the Manage Quality process that graphically shows the relationship between two variables.**

**What is the term used to describe a set of structured observation techniques used to determine if project activities comply with policies, processes, and procedures?**

# Quality audit

**What is the key objective of the three resource management processes in the Executing Process Group?**

**The key objective of the resource management processes is to obtain, develop, and manage a team, resources, and procurements to complete all project work.**

**Explain what the resource calendar does.**

**The resource calendar defines the exact time frames when each project resource is available to the project.**

**Does a weak-matrix or strong-matrix organizational structure offer project managers less access/control of resources?**



# **Weak-matrix**

**A weak-matrix organizational structure is closer to a projectized structure. Therefore, the project manager has less authority to control resources.**

**Which management plan instructs the way in which external resources are obtained?**

# **Procurement management plan**

The resource management plan instructs the way in which internal resources are obtained and the procurement management plan instructs on how to obtain external resources.

\_\_\_\_\_ decision tools  
allow the project team to evaluate  
resource options and select  
the optimal mix to meet the  
project's needs.

# Multicriteria

Multicriteria decision tools are a key tool and technique of the Acquire Resources process. Criteria are weighted to reflect their relative importance. Selection criteria may include resource availability, cost, experience, or location.

**In order, name the five states of the Tuckman ladder, which is used to evaluate team development.**

**Forming, storming, norming,  
performing, adjourning**

**Which key output produced by the Develop Team process allows the current status of team development to be addressed and tracked?**



# **Team performance assessments**

**The team's overall performance  
can be improved through which  
four actions?**

# **Training, coaching, mentoring, change requests**

The \_\_\_\_\_ defines in clear terms the team's values and operating guidelines.

# **Team charter**

**The team charter is an input to the  
9.4 Develop Team process.**

\_\_\_\_\_ is the ability  
to identify, assess, and manage  
the emotions of oneself, others,  
and groups.

# **Emotional intelligence**

**Name the five conflict resolution techniques defined in the Manage Team process.**



**Withdraw/avoid, smooth/  
accommodate, compromise/  
reconcile, force/direct,  
collaborate/problem solve**

**In which conflict resolution technique does the project manager retreat from the conflict?**

# **Withdraw/avoid**

**This technique may cause an issue to worsen if the issue is not rectified.**

**By leveraging which conflict resolution technique would you push your viewpoint through power, often creating a win-lose situation?**

**Force/direct**

**Name the conflict resolution technique aimed at creating a win-win situation where both parties' viewpoints are shared and incorporated?**

**Collaborate/  
problem solve**

**What is the potential downside of using the smooth/accommodate conflict resolution technique?**



# **Risk of the issue not being adequately addressed**

**Smooth/accommodate involves emphasizing agreement while ignoring/conceding differences in hopes of maintaining harmony.**

**True or False:**

**The Manage Communications process is conducted only once.**

# **False**

**Manage Communications is an iterative process that is constantly collecting, evaluating, storing, and distributing information from updates, issues, and changes of other processes.**

The \_\_\_\_\_ is the software  
by which project information  
is distributed.

# **Project management information system (PMIS)**

**What are the key objectives of the Implement Risk Responses process?**

**To minimize a project's risk exposure and maximize opportunities by implementing agreed-upon risk response plans.**

**What is the name of the individual responsible for ensuring the risk response plans for a specific risk are fully implemented?**



# **Risk owner**

**During which process is the final agreement and contract with a seller completed?**

# **Conduct Procurements**

**What type of meeting is used to provide prospective contractors the opportunity to gain a deeper understanding of the procurement statement of work?**

# **Bidder conference**

Which of the following is not a characteristic of a bidder conference?

- A) Defined meeting to provide detailed information
- B) Allows all sellers the opportunity to ask questions
- C) Each seller can only hear the responses to their question
- D) Non-disclosure agreements (NDAs) are often required

## **C) Each seller can only hear the responses to their question**

It is critical that no seller be provided preferential treatment in the bidder conference. By its nature the conference is open, and all sellers are provided the exact same information and can hear the responses to all questions.

**What is the term for a potential list of sellers within a competitive range?**



# Select sellers

**True or False:**

**The person authorized to sign legal agreements is often a purchasing or legal representative, not the project manager.**

# True

**Due to the specialized nature of procurements and the liability involved, it is often not the project manager who is authorized to sign legal agreements.**

**Which of the following documents are not provided to potential contractors?**

- A) Source selection criteria**
- B) Request for proposal**
- C) Procurement statement of work**

## **B) Source selection criteria**

The source selection criteria provide the internal logic by which contractors will be selected. This must not be distributed to the bidding contractors.

**The Manage Stakeholder  
Engagement and \_\_\_\_\_  
processes work in concert;  
each focuses effort on aligning  
stakeholders and assisting in better  
decision making.**

# **Manage Communications**

**The stakeholder engagement and communications knowledge areas are linked. These two work together to achieve a similar goal of ensuring constant and appropriate flow of information to and from stakeholders.**

Which document is most likely used to record problems and concerns with project communications efforts?

- A) Issue log
- B) Assumption log
- C) Stakeholder register
- D) Communications management plan



# **A) Issue log**

Problems and concerns with stakeholder communications would be recorded on the issue log. The issue log is both an input and output of the Manage Stakeholder Engagement process. This document is constantly updated through the project.

# **MONITORING AND CONTROLLING**

**Which of the following is not an objective of the Monitoring and Controlling Process Group?**

- A) Track, review, and regulate project progress and performance**
- B) Identify areas in which changes to the plans are required and initiate change requests where needed**
- C) Objectively evaluate and formally accept project deliverables**
- D) Deliver project deliverables, once completed, to the customer**

## **D) Deliver project deliverables, once completed, to the customer**

While the project team does ensure that all deliverables meet the quality standards (Control Quality) and are approved by the customer (Validate Scope), no deliverable is officially transferred to the customer until the end of the project in the Close Project or Phase process.

**Which of the following is not produced during the Monitoring and Controlling Process Group?**

- A) Work performance data**
- B) Work performance information**
- C) Work performance reports**
- D) Schedule and cost forecasts**

## **A) Work performance data**

**Work performance data are produced during the Executing Process Group by the Direct and Manage Project Work process. The data are a valuable input to the processes in the Monitoring and Controlling Process Group.**

**True or False:**

**The Monitor and Control Project Work process provides insights into the health of a project by tracking, reviewing, and reporting on actual vs. expected progress.**

# **True**

**The focus of the Monitor and Control Project Work process is to maintain a clear understanding of how the project is progressing against the project baselines and project plans.**



**Which document, produced as a key output of the Monitor and Control Project Work process, summarizes project performance and forecasts?**

# **Work performance reports**

**Work performance reports summarize work performance information concisely and are critical to keep stakeholders aware of the project's progress and to generate decisions or action.**

\_\_\_\_\_ are submitted to correct current and potential project performance issues.

# **Change requests**

**How are work performance data translated into work performance information?**

# **Data analysis**

**It is through data analysis that the raw work performance data are translated directly into work performance information. This is one of the primary activities that occurs in the M/C Process Group.**

**What is the desired impact of the work performance reports generated as an output of the Monitor and Control Project Work process?**

**To maintain stakeholder  
awareness and generate  
decisions or action**



**Which type of analysis identifies the difference between planned performance and actual performance?**

# **Variance analysis**

**Variance analysis is a key tool and technique used during the Monitor and Control Project Work process to determine the condition of the project.**

**Any change request that potentially impacts a project baseline must be evaluated using the formal \_\_\_\_\_ process.**

# **Perform Integrated Change Control**

**In which process are the approved change requests implemented?**

# **Direct and Manage Project Work**

**All approved change requests flow back to the Direct and Manage Project Work process as inputs to be implemented.**

Change requests can only be implemented after they are transformed into \_\_\_\_\_.

# **Approved change requests**

**Change requests can only be implemented after they are transformed into approved change requests.**



\_\_\_\_\_ is the process  
of obtaining the customer's  
formal acceptance of completed  
project deliverables.

# **Validate Scope**

**The purpose of the Validate Scope process is to obtain the customer's formal acceptance of the completed project deliverables.**

**The verified deliverables that are produced as outputs by the \_\_\_\_\_ process are the main inputs leveraged by the Validate Scope process.**

# **Control Quality**

**The verified deliverables produced by the Control Quality process are what are evaluated for formal customer acceptance in the Validate Scope process.**

\_\_\_\_\_ is the formal document signifying that the customer has accepted a deliverable as complete and satisfactory.

**Accepted deliverable**

**Which document produced in the Planning Process Group links the project requirements to the deliverables that satisfy them?**

# **Requirements traceability matrix**

The requirements traceability matrix produced in the Collect Requirements process visually displays the deliverables that must be satisfied.



**Which analysis technique used during the Control Scope process determines if project performance is improving or deteriorating by examining historical results?**

# **Trend analysis**

**How does variance analysis  
work and what type of actions  
could it facilitate?**

**Variance analysis compares the baseline to the actual results. If the variance exceeds a threshold, then corrective or preventative action may be developed. If the actions impact the baseline, then a change request will be generated.**

**True or False:**

**The Control Scope process is conducted throughout the life of the project.**

# True

**After the scope baseline is defined, the Control Scope process must be conducted throughout the entire project.**

**This process is essential as it helps to monitor the success of the project and the prevention of scope creep.**

**How do schedule variance (SV) and schedule performance (SPI) differ when analyzing a project's schedule performance?**

**Schedule variance defines the amount a project is ahead/behind the schedule baseline.**

**Schedule performance defines how efficiently the team is completing the work.**



**By which standard is the actual schedule performance evaluated during the Control Schedule process?**

# **Schedule baseline**

**The schedule baseline is the standard by which schedule progress is evaluated during the Control Schedule process.**

**The Control Costs process centers on understanding both the total amount spent and the \_\_\_\_\_ of the money spent to complete project activities.**

# **Effectiveness**

**Analysis conducted during the Control Cost process determines the effectiveness of the money spent on a project by analyzing the total amount spent and the value generated from the spend.**

**Which variable defines the total budget amount allocated for the project?**

# **Budget at completion (BAC)**

**Planned value (PV) defines the value of work that \_\_\_\_\_ done.**

# **Should be**

**Planned value (PV) defines the value of the work that should be done. This creates the standard by which progress will be measured.**



Earned value (EV) defines the value of work that \_\_\_\_\_ done.

# Is

**Earned value (EV) defines the value of the work that is done. This is often used to calculate the project's completion percentage.**

**Schedule variance (SV) determines the amount a project is ahead/behind the schedule baseline. What does a negative schedule baseline indicate?**

## **Project is behind schedule**

**A negative SV indicates that a project is behind schedule, while projects with positive SVs are ahead of schedule.**

**At the completion of a project, what will the SV value be?**

# **Zero**

**The schedule variance will always be zero at the end of the project because all of the work planned is completed.**

**Your project team has been more efficient than originally projected in completing the project work.  
What would you expect the SPI value to be?**

# **Above 1**

**SPI values above 1 indicate that more work has been completed than planned at the period of time (indicating that the team has been more efficient than expected).**



The \_\_\_\_\_ variable determines if the project is ahead or behind the budget defined in the cost baseline.

# **Cost variance (CV)**

**The cost variance (CV) determines the amount of budget deficit or surplus at a given time.**

**Which EVM variable calculates the expected total cost of the project at the completion of all project work?**

## **Estimate at completion (EAC)**

**EAC determines the expected total cost at the completion of all project work.**

**True or False:**

**The estimate to complete (ETC) calculates the expected cost to finish all the remaining project work.**

# True

**Estimate to complete (ETC)  
calculates the expected cost to  
finish all the remaining project work.**

$$\text{ETC} = \text{EAC} - \text{AC}$$

The \_\_\_\_\_ variable determines the CPI that must be achieved with the remaining resources to meet a specific management goal.

## **To-complete performance index (TCPI)**

**TCPI evaluates the current performance and determines the CPI rate that must be maintained to hit a defined management goal. Two equations exist to calculate the TCPI to meet the management goals of BAC or EAC.**



**Is a TCPI above or below 1 more  
difficult to meet?**

# **Above 1**

**TCPI values above 1 are more difficult to meet because the team must perform at a level more efficient than originally planned in the project cost baseline.**

**Does earned value management  
confuse or scare you?**

**If EVM scares you...don't worry.**

**Check out my EVM book and short eCourse called "EVM Made Easy" ([www.pmmasterprep.com](http://www.pmmasterprep.com)).**

**I struggled with EVM, then I figured out that it isn't that hard (hence the book title!). All I had to do was change the way I look at them. I can teach you what the confusing EVM terms really mean in simple terms and then teach you a super easy-to-use template that will allow you to get every EVM question right. Super pumped to help you!**

**What is the purpose of the Control  
Quality process?**

**The goal of the Control Quality process is to ensure project outputs are complete, correct, and satisfactory to customers by monitoring and recording quality results.**

**True or False:**

**Control quality determines if the project outputs do what they were intended to do.**

# **True**

**The Control Quality process determines if the project outputs (deliverables) do what they were intended to do.**



**Which data gathering technique uses a smaller sample to measure quality and infer the total quality of a larger population?**

# **Statistical sampling**

**Name the simple, yet powerful, data gathering technique used to gather attribute data while performing inspections (ie: defects).**

# **Check sheets**

**When a quality issue is identified,  
which type of data analysis  
technique is often leveraged  
to investigate the cause?**

# **Root cause analysis**

**Root cause analysis aims to identify the core problem driving an issue so that it can be eliminated.**

**The team has used a chart to determine whether or not a process is stable. Which chart have they leveraged?**

# Control chart



**What is the goal of the Control Resources process?**

# **Right resources, right place, right time**

**The goal of the Control Resources process is to ensure that the right resources are available at the right place and time and in the right quantity.**

**Which project document shows  
when resources are available  
to the project?**

# **Resources calendar**

**Define the purpose of the Monitor Communications process.**

**The Monitor Communications process provides a realistic evaluation of the success of actual communications and quickly initiates changes to improve results when needed.**

**What are four ways in which the team achieves the goal of ensuring each stakeholder's communication needs are met?**

- 1) Monitoring the actual communications delivered by the Manage Communications process**
- 2) Evaluating the effectiveness of communications**
- 3) Understanding changes in stakeholder needs**
- 4) Triggering changes to the communications plan**



The \_\_\_\_\_ matrix provides the desired stakeholder engagement level that the communications management plan was designed to achieve.

# **Stakeholder engagement matrix**

Which of the following is not one of the key objectives of the Monitor Risk process?

- A) Monitor the implementation of risk response plans
- B) Track identified risks
- C) Identify and analyze new risks
- D) Assign individuals to implement new corrective actions to eliminate new risks identified

**D) Assign individuals to implement new corrective actions to eliminate new risks identified**

\_\_\_\_\_ is the term that describes the approaches and contingencies that project managers build into their project's risk processes.

# **Project resilience**

The Control Procurements process focuses on all of the following, except:

- A) Establishing contracts with buyers
- B) Ensuring that both parties meet contractual obligations
- C) Confirming that the appropriate buyer parties approve deliverables
- D) Resolving all conflicts in a positive manner

## **A) Establishing contracts with buyers**

The Control Procurements process evaluates contract progress and results and manages the procurement relationship to improve the likelihood of project success. The establishment of contracts is accomplished in the Conduct Procurements process.



**When conflicts/issues occur in the fulfillment of a contract, what is the most optimal method of action?**

# **Negotiations**

**Negotiations are the optimal method of resolving contractual issues.**

**If negotiations are unable to rectify contractual issues, what method should be leveraged?**

# **Alternative dispute resolution (ADR)**

**Negotiations are the optimal method to handle conflict. If issues cannot be resolved, the project manager must follow the ADR defined in the contract.**

**What are the key outputs of the  
Control Procurement process?**

## **Closed procurements, work performance information, change requests, document updates**

The goal of the Control Procurements process is to continually evaluate the progress of the procurements and make proper adjustments so that the contract can be completed on time and budget. The closed procurements signify the successful completion of the contract.

**True or False:**

**As a project evolves, it is often necessary to modify the methods used to engage stakeholders.**

# True

The primary goal of the Monitor Stakeholder Engagement process is to maintain or increase the efficiency and effectiveness of stakeholder engagement activities. To accomplish this, it is often necessary to adjust the strategies by which each stakeholder is engaged.



**The Monitor Stakeholder Engagement process aims to \_\_\_\_\_ and \_\_\_\_\_ engagement activities as the project evolves.**

# **Adapt; improve**

**As with the Monitor Communications process, the Monitor Stakeholder Engagement process constantly gauges results and quickly initiates changes to improve the effectiveness of stakeholder engagement.**

\_\_\_\_\_ involves  
listening and then using your  
words to clarify and confirm the  
message that was heard.

# **Active listening**

**CLOSING**

**Define the key objectives of the  
Close Project or Phase process.**

- **Finalize all activities of the project, phase, or contract**
- **Archive all project or phase information**
- **Formally close the project, phase, or contract**
- **Release all organization team resources**

**In executing the Close Project process, you have created a final project report, transferred the final product to the ownership of the customer, and dismissed your project team. You believe that you can now formally close the project. What activity have you forgotten to complete?**

- A) Obtain approval from the project sponsor**
- B) Formally acknowledge the success of the team**
- C) Complete and archive the lessons learned register and all project documents**
- D) Close the charter document**



## **C) Complete and archive the lessons learned register and all project documents**

To fully complete the Close Project or Phase process, you must ensure that all project documents are updated, marked as final, and archived.

**In closing the project, the project manager reviews the \_\_\_\_\_ to ensure that all project work is complete and the project has met its objectives.**

# **Project management plans**

**True or False:**

**Projects that are terminated before all the work is completed do not require the Close Project process.**

# False

Every project, whether completed or prematurely terminated, must be formally closed. For projects terminated before completion, the close project or phase process investigates and documents the reasons for termination.

**While developing the final report for formal project closure, you utilize which project document to demonstrate compliance with the project scope?**

# **Requirements documentation**

The requirements documentation created during the Collect Requirements process describes how individual requirements meet the business need for the project.

**Due to a company reorganization, the project sponsor was recently terminated and the project was canceled. What action should the project manager take first upon being informed of this?**



# **Conduct lessons learned**

Regardless of whether a project is completed fully or terminated before completion, lessons learned must be captured and recorded. These lessons learned help to inform future projects.

**The Close Project or Phase process is the \_\_\_\_\_ finalization of all processes and process groups.**

# **Formal finalization**

**The Close Project or Phase process  
is the formal finalization of all  
processes and process groups.**

**Which three outputs must be completed before a project is properly closed?**

- **Final product, service, or results officially transferred to the customer**
- **Project documents updated and marked as final**
- **Final report created**

Of the four data analysis techniques used in the Close Project or Phase process, which technique is focused on identifying lessons learned and knowledge sharing opportunities to help improve future projects?

- A) Document analysis
- B) Regression analysis
- C) Trend analysis
- D) Variance analysis

# **A) Document analysis**

**Document analysis is a technique that helps identify lessons learned for future projects.**

**When using \_\_\_\_\_ , the interrelationships between project variables are analyzed to identify opportunities to improve the performance of future projects.**



# **Regression analysis**

**You inform your team that a critical output of the Close Project process is the completion and archival of the lessons learned register. What is the main reason why ensuring that the register is updated and archived important?**

- A) To create a means of identifying talented individuals that can assist in future projects**
- B) To identify and make easily available improvement ideas that can be used on comparable projects**
- C) The project cannot be formally closed until every output is produced**
- D) To highlight the largest risks and opportunities that were overcome during the project**

**B) To identify and make  
easily available improvement  
ideas that can be used on  
comparable projects**

**True or False:**

**After all project work is complete,  
it is proper to release all  
team members.**

# False

Team members should only be released from a project after all the work is verified complete, project documents have been fully evaluated/ closed out/archived, lessons learned collected/ archived, the final report generated, and the final deliverable transferred to the customer.

**What is the purpose of the final report and what does it contain?**

**The final report summarizes the project performance elements such as benefit, cost, quality, schedule, etc. The project manager should follow the communications plan to ensure proper dissemination is achieved. The final report is normally delivered to the project sponsor and all stakeholders.**

**You're half-way done. Pause and answer these questions.**

- **How high is your PMP confidence?**
- **What topics confuse you the most?**
- **What is the one PMP question or worry you wish I could answer for you?**

**Send me your answers, I will help you.**

**Go to: [www.pmmasterprep.com/contact](http://www.pmmasterprep.com/contact)**



**Seriously, I will provide you  
a detailed answer.**

**Go to:**

**<https://pmmasterprep.com/contact>**

**Or**

**Email me directly:**

**[scott@pmmasterprep.com](mailto:scott@pmmasterprep.com)**

# **AGILE PROJECT MANAGEMENT**

# **AGILE OVERVIEW**

**Sourced from PM Master Prep Agile Made  
Easy in 32 minute video**

**Who is responsible for the business decisions and maximizing the value of the product?**

# Product Owner

**What are the characteristics  
of those who make up the  
team in agile?**

- **Self-organized**
- **Cross-functional**
- **Build or maintain the product**

**What are the roles of the facilitator  
in an agile environment?**



- **Facilitator of processes**
- **Coach**
- **Conscience**
- **Defender**

**True or False:**

**The scrum master (facilitator) tells the team how to do the work.**

# **False**

**They provide guidance, support, and leadership to help the team determine how to do the work.**

# Who owns the product backlog?

# **The Product Owner**

**What is the difference between  
the sprint backlog and the  
product backlog?**

**The sprint backlog is what the team will work to complete in the current sprint. The product backlog is the queue of work to be completed for the overall project.**

**Something that provides customer value, functionality, and is tested and accepted while only being a small subset of the total project outcome is defined as:**



# **An Increment**

# What are the artifacts of Agile?

- **Product backlog**
- **Sprint backlog**
- **Increment**

**Define the term "time boxed" and advise what is the most common time box for a sprint.**

- **Time boxed means that there is a predetermined and defined length.**
- **The most common length of a sprint is two weeks.**

**When does sprint planning  
take place?**

**At the beginning of  
the sprint.**

**Who determines what is put  
onto the sprint backlog during  
sprint planning?**



**The product owner and the team collaborate to determine what items to pull into the sprint to maximize value creation.**

**How long is the daily stand up?**

**15 minutes**

**What is another term for  
sprint review?**

# Demo

**What is the difference between  
a sprint review and a sprint  
retrospective?**

- **Sprint review focuses on inspection of the product, getting customer feedback, and gaining a better understanding of what the customer needs.**
- **Sprint retrospective focuses on processes and product development to look at what went well, what did not, and how it can be improved in the next sprint.**

**What is the purpose of the  
product backlog?**



**The product backlog is made up of user wants and candidate work. It is owned by the product owner and helps the team complete the right things in the right order.**

Sprint planning is based on the \_\_\_\_\_.  
All sprint planning should start with a \_\_\_\_\_.

# **product backlog, blank slate**

**True or False:**

**During sprint planning the product owner asks the team to "consider" items and then the team comes up with how to complete them.**

**True**

The purpose of collaborative sprint planning is to produce

---

# **optimal value creation**

**What should be communicated  
during a daily scrum/daily stand up?**



- **What work was completed yesterday.**
- **What issues were experienced.**
- **What will be completed today.**

**What is the purpose of the daily  
scrum/daily stand-up?**

- **To achieve fast cycles of learning.**
- **To get a better plan to deliver the value.**

**What is the purpose of a  
sprint review (demo)?**

- **To determine if the product meets the customers' needs.**
- **To determine if the product is fit for purpose.**
- **To give the team learning feedback and update the product backlog.**

**What is the purpose of a  
sprint retrospective?**

- **For the team to determine what they can do better next time. (In terms of process and possibly product.)**
- **This meeting is not about blame but about finding root causes and planning action items.**

**Describe the planning process  
in an agile life cycle.**



**The team plans and replans  
as more information becomes  
available from review of  
frequent deliveries.**

**What are the two types of agile life cycles?**

# **Iteration-based agile and flow-based agile.**

**A team works in timeboxes of equal duration. Is this iteration-base agile or flow-based agile?**

# **Iteration-Based**

**A team pulls from the backlog based on its capacity to start work. Is this iteration-base agile or flow-based agile?**

# Flow-Based

**A team works on features in order of importance. Is this iteration-based agile or flow-based agile?**



# Iteration-Based

**The team and business stakeholders determine the most appropriate schedule for planning, product reviews, and retrospectives. Is this iteration-base agile or flow-based agile?**

# Flow-Based

**A project that uses some agile approaches like short iterations, daily stand ups, and retrospectives but also uses upfront estimation, work assignment, and progress tracking is considered:**

- A) agile**
- B) hybrid**
- C) predictive**
- D) none of the above**

## **B) hybrid**

It would be misleading to call the approach agile since it clearly does not completely embrace the agile mindset, values, and principles. However, it would also be inaccurate to call it predictive since it is a hybrid approach.

Agile is about \_\_\_\_\_  
delivery on a frequent basis. That  
delivery creates \_\_\_\_\_  
for the team.

**(1) Customer based,  
(2) feedback**

A \_\_\_\_\_ helps teams to visualize the flow of work, make impediments easily visible, and allow flow to be managed by adjusting work in process limits.



# **Kanban board**

# **AGILE MANIFESTO**

**PM Master Prep Video**

**What are the four values of  
the agile manifesto?**

- **Individuals and interactions over processes and tools**
- **Working Software over comprehensive documentation**
- **Customer collaboration over contract negotiation**
- **Responding to change over following a plan**

**What is the highest priority in agile?**

**The highest priority is to satisfy  
the customer through early  
and continuous delivery of  
valuable software.**

**What do agile processes  
harness for the customer's  
competitive advantage?**

# **Change**

**Change is welcome even  
late in development.**



**True or False:**

**Agile prefers delivering software  
in a couple of months versus  
a couple weeks.**

# **False**

**In the agile principles you want to deliver working software frequently, from a couple of weeks to a couple of months, with a preference for the shorter timescale.**

**Based on principles of agile, who must work together daily throughout the project?**

**Business professionals  
and developers must work  
together daily throughout  
the project.**

**True or False:**

**In agile, we build projects around motivated individuals and give them the environment, support, and trust they need to get the job done.**

# **True**

**That is the fifth agile principle  
in the agile manifesto.**

**What is the most efficient method of conveying information to/within a development team?**

**Face to face  
conversation.**



**What is the primary measure of progress based on agile principles?**

**Working software**

**In agile principles what do they mean by sustainable development?**

**The sponsors, developers,  
and users should be able  
to maintain a consistent  
pace indefinitely.**

**Based on agile principles,  
what enhances agility?**

**Continuous attention  
to technical excellence  
and good design.**

**True or False:**

**In agile, simplicity, the art of maximizing the work left to do is essential.**

# **False**

**In agile, simplicity is the art  
of maximizing the amount  
of work not done.**



**Where do the best architecture requirements and designs come from in agile principles?**

# **Self-organizing teams**

**True or False:**

**Based on agile principles, at regular intervals the team reflects on how to become more effective. The team then tunes and adjusts behaviors.**

**True**

**According to the 12 principles of the Agile Manifesto, a team should value \_\_\_\_\_ and \_\_\_\_\_ delivery to satisfy the customer.**

**Early and continuous**

**Why, according to the 12 principles of the Agile Manifesto, should a team welcome change?**

**The team welcome's changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.**



**According to the 12 principles of the Agile Manifesto, describe the desired timescales.**

**Deliver working products frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.**

**True or False:**

**Business people and developers  
must work together daily  
throughout the project.**

# **True**

**Business people and developers  
must work together daily  
throughout the project.**

**Those on an agile team should possess what characteristics?**

**Build projects around motivated individuals while providing an environment, support system, and trust system they need to complete the job.**

**What is the most efficient and effective method of communicating information to/within a team?**

**The most efficient and effective method of conveying information to/within a team is face-to-face conversation.**



**What is the primary  
measure of progress?**

**A working product is the  
primary measure of progress.**

**Describe the type of development  
that an agile environment  
should promote?**

**Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a consistent pace indefinitely.**

# **SERVANT LEADERSHIP**

**PM Master Prep Video**

# What do servant leaders promote?

- **Self awareness**
- **An environment of safety, respect, and trust**
- **Service to others**

**What do servant leaders have  
to do day-to-day?**



**Facilitate and collaborate,  
facilitating collaboration**

# How do servant leaders help streamline efforts?

**By identifying and  
removing obstacles  
for the team.**

Servant leaders \_\_\_\_\_ an environment for teams success.

# Create

**What characteristics should  
servant leaders value?**

**Self-awareness, safety,  
respect, trust, and service  
to others.**

Servant leaders should help the people on their team grow by:

\_\_\_\_\_, \_\_\_\_\_,  
and \_\_\_\_\_.



**Listening, coaching,  
and facilitating.**

**As a servant leader you want to approach project work in a specific order; purpose, \_\_\_\_\_, and then process.**

# People

Servant leaders manage  
\_\_\_\_\_ to build  
communication and coordination  
with the team.

# Relationships

When project managers act as servant leaders, the emphasis shifts from \_\_\_\_\_ to \_\_\_\_\_.

# **Managing Coordination to Facilitating Collaboration**

**True or False:**

**As a servant leader of an agile team,  
you are responsible for helping  
to streamline processes that are  
impeding a team's ability to do work.**



# **True**

**Servant leaders should work to remove any bottlenecks or impediments that are hurting a team's agility.**

# **THE AGILE UMBRELLA**

**PM Master Prep Video**

**Name the agile framework for developing and sustaining complex products, with specific roles, events, and artifacts.**

# Scrum

**Describe the difference between behavior-driven development (BBD) and eXtreme Programming (XP).**

**BBD is a system of design and validation practice that uses test first principles and english-like scripts. XP is a software build technique based on frequent cycles. XP is most known for popularizing a comprehensive set of practices intended to improve the results of software projects.**

# What are crystal methods?

**Crystal is a family of methodologies that are designed to scale and provide a selection of methodology rigor based on project size and criticality.**



**Scrumban is an agile approach  
originally designed to go  
from \_\_\_\_\_ to  
\_\_\_\_\_.**

**Scrum to kanban (it has evolved into a hybrid framework).**

**Feature driven development (FDD)  
was developed to meet what size of  
software development project?**

# Large

**What are the six primary  
roles in FDD?**

- 1) Project manager**
- 2) Chief architect**
- 3) Development manager**
- 4) Chief programmer**
- 5) Class owner**
- 6) Domain expert**

Dynamic systems development method is designed to add more \_\_\_\_\_ to existing iterative methods.

# Rigor



**This agile process features more accelerated cycles and less heavyweight processes.**

# **Agile Unified Process**

**When would you need to use  
scrum of scrums?**

**When two or more scrum teams consisting of three to nine members need to coordinate their work.**

# What does the scaled agile framework do?

**It focuses on providing a knowledge base of patterns for scaling development work across all levels of the enterprise.**

# What does large scale scrum (LeSS) accomplish?

**Organizes multiple development teams toward a common goal.**



**Why would it make sense that a whole organization, not a singular product team, use enterprise scrum?**

**Enterprise scrum is a method that is used at the organizational level because it advises organizational leaders to extend the use of scrum across all aspects of the organization.**

**What are the principles of disciplined agile (DA)?**

- **People first**
- **Learning oriented**
- **Full delivery life cycle**
- **Goal driven**
- **Enterprise awareness**
- **Scalable**

**What concepts exist under the agile umbrella?**

- A) Scrum and BDD**
- B) XP and FDD**
- C) Crystal and XP**
- D) Kanban and DSDM**
- E) All of the above**

**E) All of the above**

# **UNDERSTANDING AGILE TEAM ROLES**

**PM Master Prep Video**

**In agile, three common  
roles used are:**



- 1) Cross-functional team member**
- 2) Product owner**
- 3) Team facilitator**

**Describe a cross-functional  
team member.**

**A team member with the necessary skills to produce a working product. They produce a potentially releasable product consistently and in the shortest amount of time with high quality.**

**Describe a product owner.**

**Responsible for guiding the direction the product goes in - rank the work based on its business value. They work with the team daily and provide feedback. The product owner is in consistent communication with the stakeholders, customers, and team. The product owner brings subject matter expertise into all decision making.**

**Describe a team facilitator.**

**The servant leader of the team.  
This role may also be called the  
product manager, scrum master,  
project team lead, team coach,  
or team facilitator.**

**Describe a T-shaped person.**



**A T-shaped person has one area of deep expertise and a broad ability in the remaining skills required by the team.**

# **PRODUCT OWNER EXPLAINED**

**PM Master Prep Video**

**True or False:**

**A product owner is a committee responsible for maximizing the value of a product.**

# **False**

**A product owner is one person  
not a committee.**

**How long is the product owner responsible for the product?**

**The entire lifecycle  
of the product.**

**What is the product owner's  
ultimate responsibility?**

**Guiding the direction of  
the product to deliver  
maximum value.**



The product owner \_\_\_\_\_  
the work based on its  
\_\_\_\_\_.

# **Ranks**

## **Business Value**

The product owner owns, maintains, and organizes the \_\_\_\_\_  
to help the team see how to  
deliver the highest value without  
creating waste.

# Product backlog

# **AGILE TEAM EXPLAINED**

**PM Master Prep Video**

**What are the two key features  
of agile teams?**

# **Cross-functional and self-managing**

**True or False:**

**Team members may change as the project progresses.**



# **True**

**Teams are aligned to what is needed  
and team members may change as  
the project needs change.**

# What is the definition of colocation?

**An organizational placement strategy where the project team members are physically located close to one another in order to improve communication, working relationships, and productivity.**

**What does it mean when teams  
are self-managing?**

**Team decides what work they are pulling into the sprint and decides on the right team members at the right time to complete it.**

Agile teams focus on  
\_\_\_\_\_ product  
development so they can obtain  
\_\_\_\_\_.

**rapid, feedback**

**What are the five attributes of  
successful agile teams?**



- 1) Dedicated people.**
- 2) Cross-functional team members.**
- 3) Colocation or the ability to manage any location challenges.**
- 4) Mixed team of generalists and specialists.**
- 5) Stable work environment.**

**True or False:**

**A servant leader's role is to do whatever the team asks them to do.**

# **False**

**They observe, guide, facilitate,  
coach and remove impediments  
to get the team to a better place  
but they don't do the work.**

# **SCRUM MASTER EXPLAINED**

**PM Master Prep Video**

**How does the scrum master  
(facilitator) serve the team?**

- **Improve the teams self-management.**
- **Encourage cross-functionality.**
- **Keep the team focused on creating increments that meet the definition of done.**
- **Facilitate impediment removal.**
- **Ensure agile/scrum events take place and are proper.**

**How does the scrum master  
(facilitator) serve the  
product owner?**

- **Help find techniques for product goal and product backlog management.**
- **Help the team understand the need for clear concise product backlog.**
- **Help improve the product planning process.**
- **Encourage stakeholder collaboration.**



**How does the scrum master  
(facilitator) serve the organization?**

- **Lead, train, coach in agile principles.**
- **Plan and advise on agile implementation.**
- **Help employees understand and apply empirical approach to work.**
- **Remove barriers between stakeholders and the scrum team.**

**True or False:**

**A scrum master should ensure agile/scrum events take place and are proper.**

# True

**A scrum master is a facilitator who should make sure events have the correct structure and focus and are timeboxed appropriately.**

**A scrum master facilitates between  
what three entities?**

- 1) Team**
- 2) Product owner**
- 3) Organization**

# **AGILE ROLES THREE PERSPECTIVES**

**PM Master Prep Video**

**I am a tester who works alongside designers and developers. I help to finish work in the shortest time possible, with higher quality, and my team doesn't have external dependencies. Who am I? (cross functional team member, product owner, or team facilitator)**



# **cross-functional team member**

**I am responsible for guiding the direction of the product. I rank the work based on its business value. I work with stakeholders, customers, and the teams to define product direction. Who am I? (cross functional team member, product owner, or team facilitator)**

# **product owner**

**I am a servant leader. I may also be called the project manager, scrum master, project team lead, or team coach. Who am I? (cross functional team member, product owner, or team facilitator)**

# **team facilitator**

**What is the difference between an I-shaped person and a T-shaped person in terms of skill?**

**An I-shaped person has depth of skill but not a lot of breadth. A T-shaped person has a defined specialization but has the skills, versatility, and aptitude to help other people when necessary.**

**Many successful agile teams are made up of generalizing specialists or T-Shaped people, but often do not start out that way. What causes an agile team of I-shaped people to develop into a team of generalized specialists?**



**Agile team members collaborate, self-organize, and swarm to get work completed quickly. This causes team members to routinely help each other.**

**True or False:**

**A person who multitasks between two projects equally will give 50% effort on each project.**

# **False**

**Due to the cost of task switching  
they will end up giving 20%-40%  
on each project.**

**In an agile environment, the team is focused on the \_\_\_\_\_.**

# Work

In an agile environment, the product owner is focused on the overall \_\_\_\_\_ lifecycle.

**product**

**In an agile environment, the  
scrum master is focused on the**

---



**system**

# **IDEAL AGILE WORKSPACE**

**PM Master Prep Video**

**What is another term for a shared space for stand-ups and charts?**

# Commons

**In designing common spaces,  
"caves" are considered what?**

**Offices or cubicles  
where people can work  
by themselves.**

**What are ways we can manage  
geographical distribution  
of team members?**

- **Document sharing**
- **Video conferencing**
- **Virtual workspaces**
- **Regular in person interactions where possible**



# What is a fishbowl window?

**Long-lived video link with  
multiple locations connected,  
it is open all day.**

**What is the ideal environment  
for an agile team?**

**A custom designed environment  
makes sense and promotes  
collaboration.**

**Why is a safe, honest, and transparent environment important?**

**It allows for team members and leaders to reflect on success or apply lessons learned.**

# What is remote pairing?

**Uses virtual conferencing tools to share screens, including voice and video links.**



# **AGILE PROJECT CHARTER**

**PM Master Prep Video**

**What is the purpose of an agile project charter?**

**To align the team to a  
common understanding.**

**What are the two types of  
charters in agile?**

# **Project charter and Team charter**

**In the agile project charter where does it answer the question of "why" we are doing this project?**

# Project Vision

**What is the social contract of how the team will work together in accomplishment of the overall team goals?**



# Team Charter

**What are the four components  
of a team charter?**

- 1) Team Values**
- 2) Working agreements**
- 3) Ground rules**
- 4) Group norms**

**Meeting times and standards are  
an example of what component  
of the team charter?**

# **Group norms**

**What are some examples of working agreements in a team charter?**

**What "ready" means.  
WIP standards.**

**Sustainable pace and core hours  
are examples of what component  
of a team charter?**



# **Team Values**

# What is project release criteria?

**What being "done"  
looks like.**

**At minimum, an agile project charter answers the following four questions:**

- 1) Why are we doing this project?  
(Vision)**
- 2) Who benefits and how? (vision/  
purpose)**
- 3) What does done mean for the  
project (release criteria)**
- 4) How are we going to work together?  
(Intended flow of work)**

# **PRODUCT BACKLOG PREP**

**PM Master Prep Video**

**True or False:**

**The product backlog is a static fully detailed list of all the high-level features that will be included in the product.**

# **False**

**The list is how the owner sees it today. Things float up and down based on need and features can be added or removed.**



**User stories on the backlog need  
to be detailed enough for the  
team to do what?**

**Understand, estimate and complete them (through further conversations).**

# What is a product backlog?

**A product backlog is an ordered list of high level features as the product owner sees it today in user story format. It is detailed enough for the team to understand, estimate, and complete.**

**What is a product roadmap and  
who typically produces it?**

**The product roadmap is the anticipated sequence of deliverables and is typically created by the product owner.**

**What is the purpose of backlog refinement meetings?**

**To refine enough stories so that the team understands them and how they relate to each other.**



**From a high-level, explain how scope is developed differently in an agile environment than in predictive.**

**Agile spends less time definitively defining the complete scope at the beginning of the project. It instead focuses on the plan and process for its ongoing discovery and refinement.**

# **USER STORIES**

**PM Master Prep Video**

**What are the three C's of  
a user story?**

- 1) Card**
- 2) Conversation**
- 3) Confirmation**

**What is a user story?**

**A brief description of deliverable value for a specific user. It is a promise for a conversation to clarify details.**

**What is the "Conversation" in regards to user stories?**



**The second C of user stories is the details that out via discussion with the product owner, it helps to get a deeper understanding. It is used for the cards at the top of the product backlog.**

**When we are talking about acceptance criteria in user stories which C are we talking about?**

# Confirmation

These are the expectations of "done" from the product owner.

# How are user stories structured?

**As a \_\_\_\_\_**  
**(User(who)),**  
**I want to be \_\_\_\_\_**  
**(Value(what)),**  
**so that I can \_\_\_\_\_**  
**(Reason(why))**

**True or False:**

**We take every user story as soon it's created and we immediately add in depth details to fully understand and plan for all the product requirements.**

# **False**

**We only get details with follow up questions when needed. We don't want to waste our time so, instead, we focus on the user stories with the highest value.**

# **PRODUCT BACKLOG REFINEMENT**

**PM Master Prep Video**



**Why do we rank and refine user stories during backlog refinement?**

**So that the most important work  
is visible and ready to work in  
the next iteration.**

**How do we evaluate each card in the backlog refinement?**

**By having focused discussions between the Product Owner, Team and SMEs to understand what the intention is, the potential challenges, the dependencies, and create an estimate in relation to the other cards.**

**True or False:**

**Backlog refinement is continual.**

# **True**

**We are always refining the backlog to make sure we are working on user stores that are the most valuable. The ones with the highest priority have the most refinement.**

**What is the length of a backlog refinement meeting in an iteration-based agile project?**

**Two to Three Hours**



# What do refinement discussions drive?

**Understanding (talking it out to get to a common understanding).**

**Where do we use the acceptance criteria defined in the refinement discussions?**

**It becomes the product owner's script for the product demo/review.**

# **SPRINT PLANNING AND BACKLOG**

**PM Master Prep Video**

# What initiates the sprint?

**Sprint planning, where we select the work to be performed in the sprint.**

**True or False:**

**The product owner decides what work will be performed in the sprint.**



# **False**

**It's the team in collaboration with the product owner who decide what work will be pulled into the sprint.**

**How long is a sprint planning meeting for a two week sprint?**

**For a two week iteration it would  
be a focused four hour time  
boxed meeting.**

**What is the key thing to discuss in a sprint planning meeting?**

**It's key to discuss the most important backlog items and how they map to product goals.**

**What are the three main topics discussed in sprint planning?**

- 1) Why is this sprint valuable?**
- 2) What can be done in this sprint?**
- 3) How will chosen work get done?**

**True or False:**

**In iteration-based agile, when teams have reduced capacity they only plan for work that meets that capacity.**



# True

Teams estimate what they can complete. Teams cannot be 100% sure what they can deliver since they don't know the unexpected. If the product owner makes the stories smaller, this allows teams to see progress in the form of a finished product and they learn what they will be able to accomplish in the future.

# **DAILY STAND-UPS**

**PM Master Prep Video**

**True or False:**

**A daily stand-up is just a daily status meeting.**

# **False**

**It is a synchronization meeting that helps us work through flow and get to our sprint goal.**

**What is the purpose of a  
daily stand-up?**

**Teams use daily stand-ups to commit to each other, uncover problems, and ensure work flows smoothly through the team.**

A daily stand-up should be no longer than \_\_\_\_\_ minutes.

# 15

Timebox stand ups to no longer  
than 15 minutes.



**In an iteration-based agile daily stand-up, what three questions does everyone answer in a round robin fashion?**

**What did I complete since  
the last stand-up? What am I  
planning to complete between  
now and the next stand-up?  
What are my impediments  
(or risks or problems)?**

**Flow-based agile has a different approach to stand-ups. Explain the difference between a daily stand-up in flow vs iteration-based agile.**

**Flow-based agile focuses on the team's throughput. In other words, the team assesses the board from left to right. The questions asked are: What do we need to do to advance this piece of work? Is anyone working on something that is not on the board? What do we need to finish as a team? Are there any bottlenecks or blockers to the flow of work?**

# **KANBAN BOARD**

**PM Master Prep Video**

# What is a kanban board?

**A visual board that helps  
make work flow.**

**Why would we use a kanban board  
in agile projects?**



**To limit WIP (work in progress),  
to align processes, and to  
highlight bottlenecks.**

**What are the five key elements  
of a kanban board?**

**Visual signals (user story cards),  
columns (make a workflow),  
commitment point, delivery point,  
and WIP limits.**

# How is a kanban board utilized?

**A kanban board is a visualization tool that enables improvements to the flow of work by making bottlenecks and work quantitatatives visible.**

# DEMO/REVIEW

**PM Master Prep Video**

# When are demos/reviews held?

**At the end of every sprint  
(or when needed if you are in  
flow based agile).**



# Who attends the demo/review?

**Team, facilitator (scrum master), product owner, other stakeholders as needed.**

**True or False:**

**The demo/review is really a chance for the team and stakeholders to inspect and adapt the product.**

DEMO/REVIEW

**True**

**As the team completes the features, usually in the form of user stories, the team periodically demonstrates the working product. The \_\_\_\_\_ sees the demonstration and accepts or declines the features/stories.**

# **product owner**

**When does a demonstration happen  
in flow-based agile?**

**The team demos when it is time to do so and when enough features have been completed to give an understanding of the product.**



**As a general rule, demos should  
occur at least once every  
\_\_\_\_\_ weeks.**

# Two

# **RETROSPECTIVE**

**PM Master Prep Video**

**During which part of the sprint do we do the retrospective?**

**Held at the end of  
every sprint.**

**How long is the max time allowed for a retrospective in a two week sprint?**

**One and a half hours**

**What is the goal of the  
retrospective?**



**The goal is to reflect on  
progress and improve;  
one-two improvements.**

**True or False:**

**A retrospective is about figuring out who is to blame for issues that occurred during the sprint.**

# **False**

**It is not about blame but  
about improvement.**

**Why is the retrospective the single most important agile project practice?**

**It allows the team to learn about, improve, and adapt its process.**

**Retrospectives help the team learn  
from its \_\_\_\_\_ work  
on the product.**

# Previous

The retrospective is not about \_\_\_\_\_ but is about looking at \_\_\_\_\_ and \_\_\_\_\_ data to find \_\_\_\_\_ and develop an \_\_\_\_\_.



- **Blame**
- **Qualitative**
- **Quantitative**
- **Root cause**
- **Action plan**

# **MEASURING AGILE PROGRESS**

**PM Master Prep Video**

**How is a burndown chart used to measure progress in agile?**

**A burndown chart is a graphic representation of how quickly the team is working through the user stories visualizing the amount of story points remain.**

**How is a burnup chart used to measure progress in agile?**

**A burnup chart is a graphic representation of how much work has been completed visualizing how many story points have been completed.**

**What is the difference between  
lead time and cycle time in  
flow-based agile?**

**Lead time is the total time to complete an item, from the time it was added to the time it's delivered. The cycle time is the time to process an item and only includes the time the item was actually being worked on. It does not include the time it was sitting ready to be worked on.**



**What is the term that refers to the time an item waits ready until it's started in flow based agile?**

# Response time

Agile favors \_\_\_\_\_ and  
\_\_\_\_\_ measurements  
instead of predictive measurements.

**empirical, value based**

# Why are baselines not used in agile?

**In agile, the team limits its estimation to the next few weeks, not completion of the project.**

**Define velocity in an iterative-based agile environment.**

**Velocity is the sum of the story points sizes for features completed in an iteration.**



**What is a "reliable velocity" in an iterative-based agile environment?**

**The average stories or story points are able to be completed in an iteration. This allows the team to predict project length.**

**What chart can a team use to measure Earned Value (EV) in an agile environment?**

**Teams can use a burn up chart where the left Y axis represents story points as scope and the right Y axis represents the project spend.**

**How do you calculate the schedule performance index (SPI) in agile terms?**

**SPI = Completed Features/Planned Features. For example if a team planned to complete 50 story points in an iteration, but only completed 30 then the SPI is 30/50 or .6 - this means that that team is only working at 60% of the rate planned.**

**How do you calculate cost  
performance index (CPI)  
in agile terms?**

**CPI = Earned Value/actual  
costs to date.**

***\*EV = completed features to date***



# **AGILE PROCUREMENTS AND CONTRACTS**

**PM Master Prep Video**

**Because the Agile Manifesto values,  
"customer collaboration over  
contract negotiation," procurement  
should be a collaborative  
process that pursues a shared  
\_\_\_\_\_ relationship.**

**risk-reward**

**Describe the following contracting technique that can formulate a shared risk reward relationship in an agile environment:**

**(Multi-tiered structure)**

- **Be more flexible.**
- **Document different elements of the project in different documents.**
- **You can have a master service agreement and then add on extra elements as the project progresses.**
- **Then you can amend the schedule of services to meet your current needs.**
- **Use a statement of work if you need more formal ways of defining scope elements etc.**
- **Having a more flexible way to procure services makes it easier to make changes and gives you more options with how you work together.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Emphasize value delivered)**

**Contract payments are staggered based on the delivery of value instead of particular artifacts.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Fixed-Price increments)**



**Instead of nailing down the entire budget and scope in a single agreement, the scope is decomposed into smaller fixed-price micro deliveries (such as user stories). This allows customers to have control over how the money is spent. Suppliers benefit by not overcommitting to a single feature.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Not-to-exceed time and materials)**

**The overall budget is limited to a fixed amount. This allows the customers to implement new ideas and innovations within an already established capacity.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Graduated time and materials)**

**The supplier may be rewarded with a higher hourly rate when delivery is earlier than the contracted deadline.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Early Cancellation Option)**

**The customer can buy the remainder of the project for a cancellation fee. This way the customer limits how much of the budget is impacted and the supplier still can earn money for services no longer required.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Dynamic scope options)**



**If the budget is fixed,  
a supplier may give the  
customer the option to change  
the project at specific agreed  
up points in the project.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Team augmentation)**

**Funding the team rather than a specific scope - this still gives the customer control over what should actually be done.**

**Describe the following contracting technique that can formalize a shared risk reward relationship in an agile environment:**

**(Favor full-service suppliers)**

**Choosing suppliers that can deliver full value rather than using a multisupplier strategy (each supplier only does one thing).**