

Exam : VMA

**Title : Value Methodology
Associate**

Version : DEMO

1. An effective Information Phase kickoff meeting:

- A. Discusses the challenges of the proposed VM study approach.
- B. Outlines goals for the study subject and VM study objectives.
- C. Indicates the VM solutions desired by decision makers.
- D. Describes how functions have normally been accomplished.

Answer: B

Explanation:

The Information Phase is the first phase of the Value Methodology (VM) Job Plan, where the team gathers and understands data about the study subject, as taught in the VMF 1 course (Core Competency #3: Value Methodology Job Plan). According to SAVE International's Value Methodology Standard, "an effective Information Phase kickoff meeting sets the stage for the VM study by outlining the goals for the study subject and the VM study objectives, ensuring alignment among team members and stakeholders." This involves clarifying the purpose of the study, the project's goals (e.g., reduce costs, improve performance), and the specific objectives of the VM study (e.g., achieve 20% cost savings while maintaining function). This aligns with the primary objective of the Information Phase—to understand the subject—and ensures the team starts with a clear direction.

Option A (Discusses the challenges of the proposed VM study approach) is incorrect because, while challenges may be acknowledged, the primary focus of the kickoff is to set goals and objectives, not discuss challenges.

Option B (Outlines goals for the study subject and VM study objectives) is correct, as it matches the purpose of an effective Information Phase kickoff meeting.

Option C (Indicates the VM solutions desired by decision makers) is incorrect because solutions are developed later (e.g., in the Creativity and Development Phases), not during the Information Phase kickoff.

Option D (Describes how functions have normally been accomplished) is incorrect because this level of functional detail is addressed in the Function Analysis Phase, not the Information Phase kickoff.

SAVE International, "Value Methodology Standard and Body of Knowledge," available at <https://www.value-eng.org>, detailing the role of the Information Phase kickoff in setting goals and objectives.

SAVE International, VMF 1 Core Competency #3 (Value Methodology Job Plan), emphasizing the importance of outlining goals during the Information Phase (consistent with Question 39).

2. The VM is defined by SAVE International as a:

- A. Structured process
- B. Specialized process
- C. Systematic process
- D. Sequential process

Answer: C

Explanation:

Value Methodology (VM) is defined by SAVE International in its Value Methodology Standard as "a **systematic process** that uses a structured Job Plan to improve the value of projects, products, or processes by analyzing their functions and identifying opportunities to achieve required functions at the lowest total cost without compromising quality or performance." The term "systematic" emphasizes the methodical, disciplined approach of VM, which follows a defined sequence of phases (the VM Job Plan)

and uses specific tools like Function Analysis and cost modeling to ensure consistency and effectiveness.

Option A (Structured process) is partially correct, as VM is structured, but “systematic” is the precise term used by SAVE International to describe the methodology’s comprehensive and methodical nature.

Option B (Specialized process) is incorrect because VM is a general methodology applicable across industries, not limited to a specific domain.

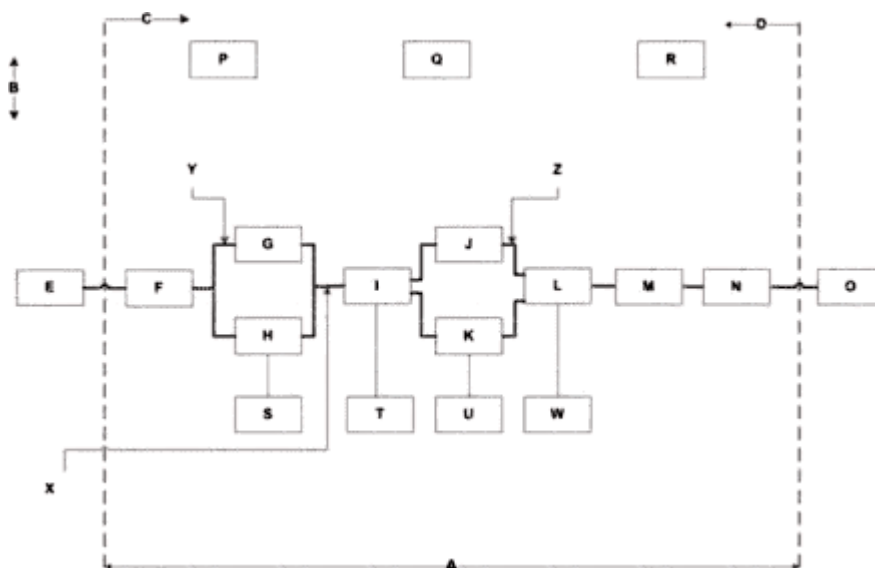
Option C (Systematic process) is correct, directly matching SAVE International’s definition of VM.

Option D (Sequential process) is incorrect because, while the VM Job Plan is sequential, the definition of VM focuses on its systematic nature, not just the sequence.

SAVE International, “Value Methodology Standard and Body of Knowledge,” available at <https://www.value-eng.org>, defining VM as a systematic process.

SAVE International, “Value Methodology Associate (VMA) Certification,” <https://www.value-eng.org/page/VMA>, referencing VMF 1 Core Competency #1 (Value Methodology Overview).

3.Y is pointing to the



- A. "AND" Gate
- B. Minor Logic Path
- C. Critical Logic Path
- D. "OR" Gate

Answer: C

Explanation:

The diagram provided is a Function Analysis System Technique (FAST) diagram, a key tool in Value Methodology’s Function Analysis phase, as taught in the VMF 1 course. FAST diagrams map the relationships between functions of a system, showing “how” and “why” relationships to identify the critical logic path (the primary sequence of functions that achieve the system’s basic function) and minor logic paths (supporting functions). In FAST diagramming, functions are represented by boxes (e.g., G, H, J, K), and their relationships are shown with arrows.

Y is a red arrow connecting function G to function J, running horizontally across the diagram. In FAST diagrams, the horizontal path from left to right represents the **critical logic path**, which answers the question “how” each function is achieved to fulfill the system’s primary purpose. Here, the path from E to

F to G to J to L to M to N to O is the main sequence of functions, indicating the critical logic path.

Z (another red arrow) points to a vertical connection between J and K, which represents a minor logic path—supporting functions that occur simultaneously or are secondary to the main path.

Option A ("AND" Gate) and Option D ("OR" Gate) are incorrect because FAST diagrams use logic gates to show relationships between functions (e.g., AND for concurrent functions, OR for alternatives), but Y is an arrow on the main path, not a gate. Gates are typically symbols (e.g., triangles or diamonds) at junctions, not arrows.

Option B (Minor Logic Path) is incorrect because minor logic paths are vertical connections in FAST diagrams (e.g., Z pointing to J-K), not the horizontal path that Y indicates.

Option C (Critical Logic Path) is correct because Y lies on the main horizontal path, which represents the critical sequence of functions in a FAST diagram.

SAVE International, VMF 1 Core Competency #2 (Function Analysis), which includes the use of FAST diagrams to map critical and minor logic paths.

SAVE International, "Value Methodology Standard," section on Function Analysis, describing FAST diagramming conventions (horizontal for critical path, vertical for minor paths).

4.Which of the following is the risk response strategy for opportunities that seek to increase the probability of an opportunity occurring and/or the magnitude of results being beneficial?

- A. Exploit
- B. Share
- C. Mitigate
- D. Enhance

Answer: D

Explanation:

Risk management in Value Methodology (VM) includes strategies for both threats and opportunities, particularly during the Implementation Planning phase, as taught in the VMF 1 course (Core Competency #8: Implementation Planning). According to SAVE International's Value Methodology Standard, which aligns with project management best practices (e.g., PMI's PMBOK, as noted in Question 28), risk response strategies for opportunities include:

Exploit: Ensure the opportunity is realized by taking actions to make it certain (e.g., assigning the best resources).

Share: Partner with others to increase the likelihood or benefit of the opportunity (e.g., joint ventures).

Enhance: Increase the probability of the opportunity occurring and/or the magnitude of its beneficial results (e.g., by improving conditions or amplifying benefits).

Accept: Take no action to influence the opportunity.

The question specifically asks for the strategy that seeks to "increase the probability of an opportunity occurring and/or the magnitude of results being beneficial," which directly matches the definition of **Enhance**. For example, in a VM study, enhancing an opportunity might involve marketing a new feature to increase its adoption rate (probability) or improving its design to maximize savings (magnitude).

Option A (Exploit) is incorrect because exploiting ensures the opportunity happens, not necessarily increasing its probability or magnitude.

Option B (Share) is incorrect because sharing involves collaboration, not directly increasing probability or magnitude.

Option C (Mitigate) is incorrect because mitigation applies to threats, not opportunities.

Option D (Enhance) is correct, as it focuses on increasing the probability and/or magnitude of an opportunity's benefits.

SAVE International, VMF 1 Core Competency #8 (Implementation Planning), detailing risk response strategies for opportunities, including Enhance.

SAVE International, "Value Methodology Standard," section on risk management, referencing strategies like Enhance for opportunities (consistent with Question 28).

5. In SWOT analysis:

- A. Strengths and opportunities are internal attributes.
- B. Threats and strengths are harmful attributes.
- C. Strengths and weaknesses are helpful attributes.
- D. Opportunities and threats are external attributes.

Answer: D

Explanation:

SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) is a tool sometimes used in Value Methodology, particularly during the Information Phase or Evaluation Phase, to assess the context of a project or product, as taught in the VMF 1 course (Core Competency #3: Value Methodology Job Plan). According to SAVE International's Value Methodology Standard, "SWOT analysis evaluates internal and external factors: Strengths and Weaknesses are internal attributes of the system or organization, while Opportunities and Threats are external attributes from the environment."

Strengths: Internal, helpful attributes (e.g., strong design team).

Weaknesses: Internal, harmful attributes (e.g., high production costs).

Opportunities: External, helpful attributes (e.g., market demand).

Threats: External, harmful attributes (e.g., regulatory changes).

This framework helps the VM team identify factors that could impact the study's success, such as external opportunities to leverage or threats to mitigate.

Option A (Strengths and opportunities are internal attributes) is incorrect because opportunities are external, not internal.

Option B (Threats and strengths are harmful attributes) is incorrect because strengths are helpful, not harmful.

Option C (Strengths and weaknesses are helpful attributes) is incorrect because weaknesses are harmful, not helpful.

Option D (Opportunities and threats are external attributes) is correct, as both are external factors in SWOT analysis.

SAVE International, VMF 1 Core Competency #3 (Value Methodology Job Plan), noting the use of SWOT analysis to assess internal and external factors.

SAVE International, "Value Methodology Standard," section on analytical tools, defining SWOT analysis and its categories.