PRACTICE QUESTIONS

Value-Driven Delivery

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The following are practice questions for the PMI-ACP® exam. See pages 3 and 4 of this document for the correct answers and explanations.

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1. Which of the following is NOT an advantage of limiting work in progress (WIP)?
   A. It reduces the potential need to rework a large collection of flawed, partially completed items.
   B. It helps optimize throughput to make processes work more efficiently.
   C. It brings bottlenecks in the production process to the surface so they can be identified and resolved.
   D. It maximizes resource utilization to make processes work more efficiently.

2. Project X has an IRR of 12%, and project Y has an IRR of 10%. Which project represents the better rate of return?
   A. It depends on the payback period
   B. Project Y
   C. Project X
   D. Project X or Y, depending on NPV

3. Which of the following is NOT a recognized prioritization scheme?
   A. Prioritization based on business value
   B. Prioritization based on reducing risk
   C. Prioritization based on iteration velocity
   D. Prioritization based on business value and risk

4. What is a product roadmap?
   A. A list of reports and screens
   B. A view of release candidates
   C. Instructions for deployment
   D. A backlog prioritization scheme

5. Which of the following is true about agile contracts?
   A. They only work when the specs are fully defined.
   B. They only work for time and materials agreements.
   C. They can accommodate changes.
   D. They cannot easily accommodate changes.

6. What is the present value of €8,000 in 4 years, if the interest rate is 5%?
   A. €7,634
   B. €6,775
   C. €6,582
   D. €6,575
7. We put risks in the backlog to:
   A. Avoid having to keep separate risk lists
   B. Keep the team focused on risks
   C. Ensure that they get worked on in the early iterations
   D. Prevent the team from forgetting about the risks

8. On Saturday morning, Tom and his young son Tim make cupcakes together. Although Tom does not like cupcakes, he values the 30 minutes with his son that it takes to make them. Tim thinks that making the cupcakes is a chore, but he really values the 5 minutes that he spends eating them. What are the process cycle efficiencies for Tom and Tim?
   A. 86% and 14%
   B. 14% and 86%
   C. 50% and 50%
   D. 5% and 30%

9. Which of the following combinations is a valid mix for story prioritization?
   A. Customer importance and business urgency
   B. Risk reduction and technical dependency
   C. Customer value and risk reduction
   D. Team preference and customer value

10. To cut costs, company X has decided to cancel one of its money-losing projects. Project A has an IRR of −4%, project B has an IRR of −5%, and project C has an IRR of −6%. Which project should be cut?
     A. The more negative the results are, the better, so cut project A.
     B. Less-negative results are bad, so cut project B.
     C. To reduce losses, choose project C.
     D. Cancel projects A, B, and C, as they are all losing money.
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1. **Answer:** D  
   **Explanation:** Since this question is looking for the answer that is NOT an advantage of limiting WIP, if an option is true, that means it is not the answer we are looking for. Limiting WIP does reduce the potential need for rework. It also improves process efficiency and helps us find production bottlenecks. The only option listed here that is NOT an advantage of limiting WIP is the one that refers to maximizing resource utilization. Limiting WIP focuses on optimizing throughput, not resources, and we may actually decrease resource optimization to get more throughput.

2. **Answer:** C  
   **Explanation:** The answer is project X, simply because it has the larger internal rate of return (IRR). We don't need to consider the payback period or the NPV because the question asks which project has the better rate of return, which is its IRR.

3. **Answer:** C  
   **Explanation:** To get the correct answer, we need to examine each option to find the one that is NOT a prioritization scheme (or that sounds least likely to be one). Prioritization based on business value is the most common prioritization method, so it is certainly a valid prioritization scheme. Prioritization based on risk is also a valid prioritization scheme. Likewise, prioritization based on both business value and risk is valid. The only option presented here that is NOT a valid prioritization scheme is iteration velocity. This term measures the work done and the team's capacity; it is not a prioritization scheme. So prioritization based on iteration velocity is the correct answer.

4. **Answer:** B  
   **Explanation:** Creating a product roadmap is a release planning technique. A roadmap is not a list of screens and reports, because we can build a roadmap for a product even if the project has no screens and reports. The other options of deployment instructions and a backlog prioritization scheme are also incorrect.

5. **Answer:** C  
   **Explanation:** Since agile contracts have to take into account the difficulty of defining the required product characteristics in advance, they need to work even when the specs are not fully defined. Agile contracts can be used with time and materials agreements but they also work well for fixed-price projects where a cost limit cannot be exceeded and functionality is trimmed to meet the budget. A major reason agile contracts were developed was to accommodate changes, so that is the correct answer.

6. **Answer:** C  
   **Explanation:** The unit of currency makes no difference in calculating present value; whether dollars or euros, the formula is still \( FV / (1 + r)^n \). So if the interest rate is 5%, €8,000 in 4 years will be worth \( 8,000 / (1 + 0.05)^4 \), which equals €6,582.

7. **Answer:** C  
   **Explanation:** Here we have a few reasonable choices to consider, but only one option is the main reason. Putting risks in the backlog does prevent us from having to maintain a separate list, but that is not the reason we do it. It also helps keep the team focused on the risk, but again, that is not the main reason we do it. Preventing the team from forgetting about the risk is a lot like the previous idea, and is also not the real reason we put risks into the backlog. Instead, the main reason is to ensure that those items get worked on in early iterations, since delivering value early also means removing opportunities for value reduction.
Practice Questions for the PMI-ACP℠ Exam

8. **Answer: A**
   
   **Explanation:** This question involves two separate calculations of process cycle efficiency—one for Tom, who considers the baking process to be the value-added time, and one for Tim, who considers the eating process to be the value-added time. To work out the process cycle efficiency, we need to know both the total cycle time and the value-added time. The total cycle time is the same for both of them: 30 + 5 = 35 minutes. The formula for calculating the process cycle efficiency is:

   \[
   \text{Process cycle efficiency} = \frac{\text{Value-added time}}{\text{Total cycle time}}
   \]

   For Tom, who values the baking time with his son, the process cycle efficiency is 30 / 35, or 86%. For Tim, who values actually eating the cupcakes, the process cycle efficiency is 5 / 35, or 14%. Therefore, “86% and 14%” is correct. The option that reverses those answers is incorrect, since the question asked for the efficiencies of Tom and Tim, not Tim and Tom. The other options are incorrect.

9. **Answer: C**
   
   **Explanation:** Here we need to eliminate the incorrect options to find the remaining valid combination. At first glance, “customer importance and business urgency” sounds like it might be a plausible option—but since both components are based on the customer’s preference, they are similar enough that this isn't really a valid mix. “Risk reduction and technical dependency” can be eliminated because this combination doesn’t take into account the customer’s priorities—a mix is not balanced (and therefore not valid) if it doesn't consider value to the customer. “Team preference and customer value” is not a valid mix because team preference is not a valid selection criteria on its own. Although the team might prioritize a story for good reasons (for example, because it reduces risk), we don’t know that from the question. The correct option is “business value and risk reduction.” These are the classic elements that we seek to balance in prioritizing work, so this option is the most valid story prioritization mix of the choices given here.

10. **Answer: C**
    
    **Explanation:** Without more information, such as ROI (return on investment, but we are actually looking at loss instead of return in this case), the logical option is to cut the project that has the highest rate of loss. This means that we would cut project C, since it has the largest negative internal rate of return. Canceling all the projects is not the answer, since the question says that company X has decided to cancel ONE of its projects. On the exam, look out for questions like this that appear to present multiple “correct” answers but include information within the question that rules out certain choices.