

PHYS11/12: Final Exam Strategy

The G.U.E.S.S. Method and Time Management

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- Distinguish between Proficient and Extending level responses
- Demonstrate clear, logical thinking in your solutions

Understanding the Proficiency Scale

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Key Point: *How you solve a problem is as important as your final answer!*

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Pro Tip

Get worried formulas out of your head and onto paper immediately!

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Pass 3: The Finish Line (10–15 min)

Attempt remaining questions, review work, transfer answers carefully.

Introducing the G.U.E.S.S. Method

Your roadmap to **Proficient** level responses:

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Remember: This systematic approach demonstrates your thinking process!

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Key: This directly addresses the “Proficient” criterion for clear organization.

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State Your Strategy

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Example Planning Statement

"To find the power of the screen, I will first find the current used by the screen alone. Then I will use the power formula $P = IV$."

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Example Planning Statement

“To find the power of the screen, I will first find the current used by the screen alone. Then I will use the power formula $P = IV$.”

Impact: This single sentence elevates your response from “Developing” to “Proficient” by showing logical planning!

Best Practices

- Write base formulas *before* plugging in numbers

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Why This Matters

Demonstrates you understand the relevant physics concepts, not just arithmetic.

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- Work line-by-line, vertically down the page

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Good Example:

$$\begin{aligned}I_{\text{screen}} &= I_{\text{on}} - I_{\text{off}} \\&= 0.90 \text{ A} - 0.40 \text{ A} \\&= 0.50 \text{ A}\end{aligned}$$

Bad Example:

$$0.9 - 0.4 = 0.5$$

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Units are a major differentiator between “Developing” and “Proficient”!

Final Presentation

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Complete Solution Format

$$P_{\text{screen}} = 8.0 \text{ W}$$

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Reaching the 'Extending' Level

Extending = Sophisticated understanding and complete command of physics

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Hidden Details Examples

- “starts from rest” $\rightarrow v_i = 0$
- “on the moon” \rightarrow use g_{moon}
- “no atmosphere” \rightarrow no air resistance

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After a long time, the capacitor is fully charged.

$$I_C = 0 \text{ A} \quad V_C = 12 \text{ V}$$

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Extending Answer

After a long time, the capacitor is fully charged and acts like an **open circuit**.

Current (I_C): Because the circuit is open, no current can flow. $\therefore I_C = 0 \text{ A}$.

Voltage (V_C): With zero current, there is no voltage drop across the resistor ($V_R = IR = 0$). All voltage must be across the capacitor.

$$\therefore V_C = 12 \text{ V}.$$

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Final Reminder: Show your thinking process clearly – that's what the rubric measures!

Stay Calm

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Be Systematic

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Show What You Know