EXAM PAPER

Physics Unit 1 & 2 — Practice Exam 1

PREVIEW
This file has the first 15 of the 30 questions in this paper. The rest is locked: it comes with a PrepNest plan, or with the paper itself for VCE.

Reading time: 15 minutes (no writing)
Writing time: 45 minutes
Total time: 60 minutes

SECTIONS IN THIS PAPER

- Physics — 45 min

INSTRUCTIONS

You are not permitted to write during reading time — you may only read the paper and plan your approach. Answer every question you can. Write your working in the space provided for long-answer questions. Marking guidance and full explanations are provided in the separate answer key.

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Physics

45 minutes

1. A car accelerates from rest at 2 m/s² for 5 seconds. What is its final velocity?

A. 5 m/s

B. 10 m/s

C. 15 m/s

D. 20 m/s

2. Which formula gives the kinetic energy of a moving object?

A. mgh

B. ½mv²

C. mv

D. ma

3. Using Ohm's law, what is the current through a 10 Ω resistor with 20 V across it?

A. 0.5 A

B. 10 A

C. 2 A

D. 200 A

4. Which particle carries negative charge and flows to create a typical electric current in a wire?

A. Electron

B. Proton

C. Neutron

D. Positron

5. An object travels 20 m in 4 seconds at a constant speed. What is its speed?

A. 5 m/s

B. 7 m/s

C. 3 m/s

D. 10 m/s

6. An object travels 30 m in 5 seconds at a constant speed. What is its speed?

A. 8 m/s

B. 4 m/s

C. 12 m/s

D. 6 m/s

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7. An object travels 15 m in 3 seconds at a constant speed. What is its speed?

A. 3 m/s

B. 10 m/s

C. 5 m/s

D. 7 m/s

8. Using F = ma, what is the force on an object with mass 5 kg accelerating at 3 m/s²?

A. 8 N

B. 15 N

C. 20 N

D. 12 N

9. Using F = ma, what is the force on an object with mass 10 kg accelerating at 2 m/s²?

A. 20 N

B. 30 N

C. 18 N

D. 12 N

10. Using F = ma, what is the force on an object with mass 4 kg accelerating at 6 m/s²?

A. 28 N

B. 18 N

C. 10 N

D. 24 N

11. What quantity measures how fast an object's velocity is changing?

A. Displacement

B. Momentum

C. Acceleration

D. Speed

12. What is the momentum of an object with mass 4 kg moving at 5 m/s?

A. 45 kg·m/s

B. 20 kg·m/s

C. 9 kg·m/s

D. 1.25 kg·m/s

13. Using Ep = mgh with m = 1 kg, g ≈ 10 m/s², and h = 80 m, what is the gravitational potential energy?

A. 800 J

B. 810 J

C. 720 J

D. 400 J

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14. Using Ep = mgh with m = 1 kg, g ≈ 9.8 m/s², and h = 50 m, what is the gravitational potential energy?

A. 500 J

B. 440 J

C. 245 J

D. 490 J

15. Using Ohm's law, what is the current through a 4 Ω resistor with 12 V across it?

A. 6 A

B. 5 A

C. 4 A

D. 3 A

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30.

15 questions locked, up to question 30.

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PREVIEW

That’s the end of the preview

You’ve seen the first 15 of the 30 questions in Physics Unit 1 & 2 — Practice Exam 1. The full paper is worth 30 marks.

STILL TO COME	QUESTIONS	MARKS
Physics	15	15

The full paper comes with

- Every question, printed exactly like the ones in this preview
- The complete answer key, with the working behind every mark
- A topic report after marking, showing what to practice next

Get the full paper at

prepnest.com.au/practice/exams/physics-year_11-1

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