NOVA SCOTIA ADVANCED PHYSICS 11 · UNIT A · 25 QUESTIONS

Displacement, Velocity and Acceleration — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A race car accelerates from 12 metres per second to 32 metres per second in 5 seconds. Its acceleration, in metres per second squared, is**



ANSWER

Understand It with Pulse | Flag a mistake

2 **A cart starts at 5 metres per second and accelerates at 3 metres per second squared for 4 seconds. The displacement, in metres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A glider travels 225 metres in 9 seconds at constant velocity. Its velocity, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **An advanced timing experiment records displacement 150 metres in 6 seconds at constant velocity. The velocity, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A car accelerates from 6 metres per second to 30 metres per second in 6 seconds. Its acceleration, in metres per second squared, is**



ANSWER

Understand It with Pulse | Flag a mistake

6 **A displacement of 5 metres east plus 5 metres west gives total displacement of**

- A zero
- B 10 metres east
- C 10 metres west
- D 5 metres east

Understand It with Pulse | Flag a mistake

7 **A graph of displacement against time² for accelerated motion from rest is a**

- A curve upward only
- B straight line
- C horizontal line
- D circle

Understand It with Pulse | Flag a mistake

8 **A literature search in an advanced report should compare results with**

A opinions only

B published findings

C one textbook only

D class notes only

Understand It with Pulse | Flag a mistake

9 **A motion sensor measures position by timing reflected**

A light only

B ultrasound pulses

C sound only in air

D radio waves only

Understand It with Pulse | Flag a mistake

10 **A position time graph with a curve shows velocity that is**



A zero

B constant

C changing

D negative always

Understand It with Pulse | Flag a mistake

11 **A stroboscope can freeze motion by flashing at the same frequency as the**

- A room light
- B camera
- C moving object cycle
- D eye

Understand It with Pulse | Flag a mistake

12 **A vector diagram for displacement uses arrows where length shows**

- A magnitude and direction shows direction
- B mass
- C time
- D speed only

Understand It with Pulse | Flag a mistake

13 **A velocity time graph area below the axis represents displacement in the**

A positive direction only

B zero direction

C negative direction

D upward direction

Understand It with Pulse | Flag a mistake

14 **A velocity time graph with a horizontal line shows acceleration equal to**

A gravity

B speed

C distance

D zero

Understand It with Pulse | Flag a mistake

15 **A car starts at 3 metres per second and accelerates at 2 metres per second squared for 6 seconds. Its final speed, in metres per second, is**



ANSWER

Understand It with Pulse | Flag a mistake

16 **A ball is thrown upward at 20 m/s. Ignoring air resistance, how does its speed when it returns to the starting height compare with its launch speed?**

- A It is greater
- B It is less
- C It is the same
- D It is zero

Understand It with Pulse | Flag a mistake

17 **A cart accelerates from 8 metres per second to 28 metres per second in 4 seconds. Its acceleration, in metres per second squared, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A cart starts at 2 metres per second and accelerates at 5 metres per second squared for 3 seconds. The displacement, in metres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **A glider travels 360 metres in 10 seconds at constant velocity. Its velocity, in metres per second, is**

ANSWER

Understand It with Pulse | Flag a mistake

20 **A train travels 275 metres in 11 seconds at constant velocity. The velocity, in metres per second, is**



ANSWER

Understand It with Pulse | Flag a mistake

21 **An object accelerates from 20 metres per second to 50 metres per second in 10 seconds. Its acceleration, in metres per second squared, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A cart accelerates from 15 metres per second to 45 metres per second in 6 seconds. Its acceleration, in metres per second squared, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A cart starts at 10 metres per second and accelerates at 4 metres per second squared for 5 seconds. The displacement, in metres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A glider travels 144 metres in 12 seconds at constant velocity. Its velocity, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **A race car travels 420 metres in 14 seconds at constant velocity. The velocity, in metres per second, is**



ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 4
2. 44
3. 25
4. 25
5. 4
6. A
7. B
8. B
9. B
10. C
11. C
12. A
13. C
14. D
15. 15
16. A
17. 5
18. 28.5
19. 36
20. 25
21. 3
22. 5
23. 100
24. 12
25. 30

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