CALIFORNIA PHYSICS · FINAL EXAM · 50 QUESTIONS

Final Exam — 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

An object moves with initial speed 8 m/s and acceleration 2 m/s² for 3 s. Its displacement is

Question 1

An object moves with initial speed 8 m/s and acceleration 2 m/s^2 for 3 s. Its displacement is

A) 15 m

B) 42 m

C) 24 m

D) 33 m

A 15 m

B 42 m

C 24 m

D 33 m

Understand It with Pulse

Flag a mistake

2 A 2 kg object moves at 6 m/s. Its kinetic energy is

Question 2

A 2 kg object moves at 6 m/s. Its kinetic energy is

A) 72 J

B) 36 J

C) 18 J

D) 12 J

A 72 J

B 36 J

C 18 J

D 12 J

Understand It with Pulse

Flag a mistake

3 A current of 4 A flows through 5 Ω. The voltage is

Question 3

A current of 4 A flows through 5 Ω. The voltage is

A) 9 V

B) 0.8 V

C) 1.25 V

D) 20 V

- **A** 9 V
- **B** 0.8 V
- **C** 1.25 V
- **D** 20 V

Understand It with Pulse | Flag a mistake

4 A wave has period 0.25 s. Its frequency is

Question 4

A wave has period 0.25 s. Its frequency is

A) 0.25 Hz

B) 25 Hz

C) 2.5 Hz

D) 4 Hz

- **A** 0.25 Hz
- **B** 25 Hz
- **C** 2.5 Hz
- **D** 4 Hz

Understand It with Pulse | Flag a mistake

5 Use g = 10 m/s². An object dropped from rest falls for 4 s. Its speed then, in meters per second, is _____

Question 5

Use $g = 10$ m/s^2. An object dropped from rest falls for 4 s. Its speed then, in meters per second, is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

6 A 4 kg object moves at 3 m/s. Its momentum is

Question 6

A 4 kg object moves at 3 m/s. Its momentum is

A) 7 kg m/s

B) 12 kg m/s

C) 1.33 kg m/s

D) 36 kg m/s

- **A** 7 kg m/s
- **B** 12 kg m/s
- **C** 1.33 kg m/s
- **D** 36 kg m/s

Understand It with Pulse | Flag a mistake

7 A 2 A current flows for 30 s. The charge transferred is

Question 7

A 2 A current flows for 30 s. The charge transferred is

A) 32 C

B) 0.07 C

C) 15 C

D) 60 C

A 32 C

B 0.07 C

C 15 C

D 60 C

Understand It with Pulse

Flag a mistake

8

When a ray bounces off a surface, the angle of incidence equals the angle of

Question 8

When a ray bounces off a surface, the angle of incidence equals the angle of

A) dispersion

B) reflection

C) diffraction

D) refraction

A dispersion

B reflection

C diffraction

D refraction

Understand It with Pulse

Flag a mistake

9

An object starts from rest and accelerates at 3 m/s² for 6 s. Its final speed is

Question 9

An object starts from rest and accelerates at 3 m/s^2 for 6 s. Its final speed is

A) 18 m/s

B) 9 m/s

C) 12 m/s

D) 24 m/s

A 18 m/s

B 9 m/s

C 12 m/s

D 24 m/s

Understand It with Pulse

Flag a mistake

10 In an isolated collision, total momentum is

Question 10

In an isolated collision, total momentum is

A) zero

B) always lost

C) conserved

D) always doubled

- **A** zero
- **B** always lost
- **C** conserved
- **D** always doubled

Understand It with Pulse | **Flag a mistake**

11 Electric field lines point away from a

Question 11

Electric field lines point away from a

A) neutral object

B) magnet

C) negative charge

D) positive charge

A neutral object

B magnet

C negative charge

D positive charge

Understand It with Pulse

Flag a mistake

12 Increasing frequency at fixed wave speed will

Question 12

Increasing frequency at fixed wave speed will

A) increase wavelength

B) stop the wave

C) decrease wavelength

D) leave wavelength unchanged

A increase wavelength

B stop the wave

C decrease wavelength

D leave wavelength unchanged

Understand It with Pulse

Flag a mistake

13

An object starts from rest and accelerates at 6 m/s² over a distance of 12 m. Its final speed is

Question 13

An object starts from rest and accelerates at 6 m/s^2 over a distance of 12 m. Its final speed is

A) 12 m/s

B) 6 m/s

C) 24 m/s

D) 3 m/s

A 12 m/s

B 6 m/s

C 24 m/s

D 3 m/s

Understand It with Pulse

Flag a mistake

14

An object drops from height 20 m. Use g = 10 m/s². Its speed just before hitting the ground is

Question 14

An object drops from height 20 m. Use $g = 10\ \text{m/s}^2$. Its speed just before hitting the ground is

A) 20 m/s

B) 200 m/s

C) 10 m/s

D) 40 m/s

A 20 m/s

B 200 m/s

C 10 m/s

D 40 m/s

Understand It with Pulse

Flag a mistake

15 In a parallel circuit, the voltage across each branch is

Question 15

In a parallel circuit, the voltage across each branch is

A) largest in the first branch

B) split equally

C) zero

D) the same

- **A** largest in the first branch
- **B** split equally
- **C** zero
- **D** the same

Understand It with Pulse | **Flag a mistake**

16 A source moving toward an observer makes the observed frequency

Question 16

A source moving toward an observer makes the observed frequency

A) higher

B) zero

C) lower

D) unchanged

A higher

B zero

C lower

D unchanged

Understand It with Pulse

Flag a mistake

17 On a velocity time graph, the slope of the line gives the

Question 17

On a velocity time graph, the slope of the line gives the

A) displacement

B) net force

C) acceleration

D) average speed

A displacement

B net force

C acceleration

D average speed

Understand It with Pulse

Flag a mistake

18 An engine does 600 J in 20 s. Its power is

Question 18

An engine does 600 J in 20 s. Its power is

A) 12000 W

B) 620 W

C) 30 W

D) 3 W

A 12000 W

B 620 W

C 30 W

D 3 W

Understand It with Pulse

Flag a mistake

19 A transformer works only with

Question 19

A transformer works only with

A) alternating current

B) no current

C) direct current

D) static charge

A alternating current

B no current

C direct current

D static charge

Understand It with Pulse

Flag a mistake

20

In the electromagnetic spectrum, visible light has a longer wavelength than

Question 20

In the electromagnetic spectrum, visible light has a longer wavelength than

A) ultraviolet light

B) infrared

C) radio waves

D) microwaves

A ultraviolet light

B infrared

C radio waves

D microwaves

Understand It with Pulse

Flag a mistake

21

An object moves in a circle at speed 8 m/s with radius 16 m. Its centripetal acceleration is

Question 21

An object moves in a circle at speed 8 m/s with radius 16 m. Its centripetal acceleration is

A) 128 m/s^2

B) 4 m/s^2

C) 2 m/s^2

D) 64 m/s^2

A 128 m/s²

B 4 m/s²

C 2 m/s²

D 64 m/s²

Understand It with Pulse

Flag a mistake

22 A 3 kg object moving east at 4 m/s collides with a 3 kg object moving west at 4 m/s. Total momentum is

Question 22

A 3 kg object moving east at 4 m/s collides with a 3 kg object moving west at 4 m/s. Total momentum is

A) 12 kg m/s

B) 0 kg m/s

C) 6 kg m/s

D) 24 kg m/s

- **A** 12 kg m/s
- **B** 0 kg m/s
- **C** 6 kg m/s
- **D** 24 kg m/s

Understand It with Pulse | Flag a mistake

23 A current of 5 A through 4 Ω gives a voltage, in volts, of ____

Question 23

A current of 5 A through 4 Ω gives a voltage, in volts, of ____

ANSWER _____

Understand It with Pulse | Flag a mistake

24 A wave has period 0.5 s. Its frequency, in hertz, is _____

Question 24

A wave has period 0.5 s. Its frequency, in hertz, is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

25 An object travels 180 m in 15 s. Its average speed, in meters per second, is _____

Question 25

An object travels 180 m in 15 s. Its average speed, in meters per second, is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

26 A motor does 500 J in 25 s. Its power, in watts, is _____

Question 26

A motor does 500 J in 25 s. Its power, in watts, is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

27

A charge of 4 C moves through 10 V. The energy, in joules, is _____

Question 27

A charge of 4 C moves through 10 V. The energy, in joules, is ____

ANSWER

Understand It with Pulse | Flag a mistake

28

A ray hits a mirror at 40 degrees to the normal. The angle of reflection, in degrees, is _____

Question 28

A ray hits a mirror at 40 degrees to the normal. The angle of reflection, in degrees, is ____

ANSWER

Understand It with Pulse | Flag a mistake

29 Displacement differs from distance because displacement includes

Question 29

Displacement differs from distance because displacement includes

A) only the speed

B) direction

C) only the time taken

D) only the total path length

A only the speed

B direction

C only the time taken

D only the total path length

Understand It with Pulse

Flag a mistake

30

Increasing the time of an impact while keeping impulse fixed decreases the average

Question 30

Increasing the time of an impact while keeping impulse fixed decreases the average

A) mass

B) energy

C) force

D) speed change

A mass

B energy

C force

D speed change

Understand It with Pulse

Flag a mistake

31 A 24 V battery drives 4 A. The resistance is

Question 31

A 24 V battery drives 4 A. The resistance is

A) 6 Ω

B) 20 Ω

C) 96 Ω

D) 28 Ω

A 6 Ω

B 20 Ω

C 96 Ω

D 28 Ω

Understand It with Pulse

Flag a mistake

32 A wave has frequency 8 Hz and wavelength 5 m. Its speed is

Question 32

A wave has frequency 8 Hz and wavelength 5 m. Its speed is

A) 1.6 m/s

B) 40 m/s

C) 3 m/s

D) 13 m/s

- **A** 1.6 m/s
- **B** 40 m/s
- **C** 3 m/s
- **D** 13 m/s

Understand It with Pulse | Flag a mistake

33

An object with initial speed 10 m/s accelerates at 2 m/s² for 5 s. Its displacement is

Question 33

An object with initial speed 10 m/s accelerates at 2 m/s^2 for 5 s. Its displacement is

A) 60 m

B) 100 m

C) 75 m

D) 50 m

A 60 m

B 100 m

C 75 m

D 50 m

Understand It with Pulse

Flag a mistake

34 A 3 kg object moves at 8 m/s. Its kinetic energy is

Question 34

A 3 kg object moves at 8 m/s. Its kinetic energy is

A) 12 J

B) 24 J

C) 192 J

D) 96 J

A 12 J

B 24 J

C 192 J

D 96 J

Understand It with Pulse

Flag a mistake

35 A 3 A current flows for 20 s. The charge is

Question 35

A 3 A current flows for 20 s. The charge is

A) 17 C

B) 60 C

C) 23 C

D) 6.7 C

A 17 C

B 60 C

C 23 C

D 6.7 C

Understand It with Pulse

Flag a mistake

36

Sound travels at 340 m/s. An echo returns after 4 s. The distance to the surface is

Question 36

Sound travels at 340 m/s. An echo returns after 4 s. The distance to the surface is

A) 170 m

B) 1360 m

C) 680 m

D) 340 m

A 170 m

B 1360 m

C 680 m

D 340 m

Understand It with Pulse

Flag a mistake

37 Use g = 10 m/s². The weight of a 8 kg object is

Question 37

Use $g = 10\ \text{m/s}^2$. The weight of a 8 kg object is

A) 0.8 N

B) 800 N

C) 80 N

D) 18 N

- **A** 0.8 N
- **B** 800 N
- **C** 80 N
- **D** 18 N

Understand It with Pulse | Flag a mistake

38 A 100 N force acts for 0.5 s. The impulse is

Question 38

A 100 N force acts for 0.5 s. The impulse is

A) 99.5 Ns

B) 50 Ns

C) 200 Ns

D) 20 Ns

A 99.5 N s

B 50 N s

C 200 N s

D 20 N s

Understand It with Pulse

Flag a mistake

39 Opposite charges

Question 39

Opposite charges

A) repel

B) attract

C) become neutral instantly

D) have no effect

A repel

B attract

C become neutral instantly

D have no effect

Understand It with Pulse

Flag a mistake

40 The distance between two successive crests is the

Question 40

The distance between two successive crests is the

A) period

B) frequency

C) amplitude

D) wavelength

A period

B frequency

C amplitude

D wavelength

Understand It with Pulse

Flag a mistake

41

An object moves in a circle at speed 10 m/s with radius 25 m. Its centripetal acceleration is

Question 41

An object moves in a circle at speed 10 m/s with radius 25 m. Its centripetal acceleration is

A) 250 m/s^2

B) 35 m/s^2

C) 2.5 m/s^2

D) 4 m/s^2

A 250 m/s²

B 35 m/s²

C 2.5 m/s²

D 4 m/s²

Understand It with Pulse

Flag a mistake

42 A 5 kg cart at 6 m/s hits a stationary 10 kg cart and they stick. Their speed is

Question 42

A 5 kg cart at 6 m/s hits a stationary 10 kg cart and they stick. Their speed is

A) 6 m/s

B) 3 m/s

C) 2 m/s

D) 1 m/s

- **A** 6 m/s
- **B** 3 m/s
- **C** 2 m/s
- **D** 1 m/s

Understand It with Pulse | Flag a mistake

43 Resistors of 8 Ω and 2 Ω in series give an equivalent resistance, in ohms, of _____

Question 43

Resistors of 8 Ω and 2 Ω in series give an equivalent resistance, in ohms, of ____

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **A wave travels at 120 m/s with frequency 40 Hz. Its wavelength, in meters, is _____**

Question 44

A wave travels at 120 m/s with frequency 40 Hz. Its wavelength, in meters, is ____

ANSWER

Understand It with Pulse | Flag a mistake

45 **A ball is thrown upward at 20 m/s. Use g = 10 m/s². The time to reach the top, in seconds, is _____**

Question 45

A ball is thrown upward at 20 m/s. Use $g = 10\ \text{m/s}^2$. The time to reach the top, in seconds, is ____

ANSWER

Understand It with Pulse | Flag a mistake

46 **A 4 kg object moves at 10 m/s. Its kinetic energy, in joules, is _____**

Question 46

A 4 kg object moves at 10 m/s. Its kinetic energy, in joules, is ____

ANSWER

Understand It with Pulse | Flag a mistake

47 Like magnetic poles

Question 47

Like magnetic poles

A) have no effect

B) attract

C) repel

D) cancel the field

A have no effect

B attract

C repel

D cancel the field

Understand It with Pulse

Flag a mistake

48 White light through a prism spreads because different colors are

Question 48

White light through a prism spreads because different colors are

A) refracted by different amounts

B) blocked

C) reflected equally

D) absorbed equally

- A refracted by different amounts
- B blocked
- C reflected equally
- D absorbed equally

Understand It with Pulse | Flag a mistake

49 An object of weight 200 N on a 30 degree ramp has a down ramp weight component, in newtons, of ____

Question 49

An object of weight 200 N on a 30 degree ramp has a down ramp weight component, in newtons, of ____

ANSWER _____

Understand It with Pulse | Flag a mistake

50

An object falls from 45 m. Use g = 10 m/s². Its speed on landing, in meters per second, is _____

Question 50

An object falls from 45 m. Use $g = 10$ m/s^2. Its speed on landing, in meters per second, is ____

ANSWER

Understand It with Pulse

Flag a mistake

ANSWER KEY

1.	D	**18.**	C	**35.**	B
2.	B	**19.**	A	**36.**	C
3.	D	**20.**	A	**37.**	C
4.	D	**21.**	B	**38.**	B
5.	40	**22.**	B	**39.**	B
6.	B	**23.**	20	**40.**	D
7.	D	**24.**	2	**41.**	D
8.	B	**25.**	12	**42.**	C
9.	A	**26.**	20	**43.**	10
10.	C	**27.**	40	**44.**	3
11.	D	**28.**	40	**45.**	2
12.	C	**29.**	B	**46.**	200
13.	A	**30.**	C	**47.**	C
14.	A	**31.**	A	**48.**	A
15.	D	**32.**	B	**49.**	100
16.	A	**33.**	C	**50.**	30
17.	C	**34.**	D		

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