PRINCE EDWARD ISLAND PHYSICS 12 · FINAL EXAM

Final Exam — Practice Test

Prince Edward Island Physics 12 • 50 questions

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 displacement of 5 metres east and 12 metres north has magnitude in metres equal to**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **An object moves in a circle at speed 15 metres per second with radius 30 metres. Its centripetal acceleration in metres per second squared is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A 12 volt battery connected to a 6 ohm resistor gives current in amperes of**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **An object of mass 2 kilograms moving at 4 metres per second has kinetic energy in joules of**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A wave has speed 300 metres per second and wavelength 10 metres. Its frequency in hertz is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Displacement differs from distance because displacement includes**

A speed

B mass

C direction

D time

Understand It with Pulse | Flag a mistake

7 **Kepler first law says planetary orbits are**

A straight lines

B ellipses with the Sun at a focus

C circles only

D parabolas

Understand It with Pulse | Flag a mistake

8 **Electric field lines point away from**

A positive charges

B negative charges

C neutral objects

D magnets only

Understand It with Pulse | Flag a mistake

9 **An object of mass 6 kilograms at height 10 metres has gravitational potential energy in joules , using g = 10 , of**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A standing wave has points of no motion called**

A nodes

B antinodes

C crests

D troughs

Understand It with Pulse | Flag a mistake

11 **The resultant of two perpendicular vectors is found using**

- A simple subtraction
- B multiplication only
- C the Pythagorean theorem
- D simple addition

Understand It with Pulse | Flag a mistake

12 **In uniform circular motion, speed is constant but velocity changes because**

- A radius changes
- B time changes
- C direction changes
- D magnitude changes

Understand It with Pulse | Flag a mistake

13 **In a parallel circuit, voltage across each branch is**

A the same

B divided equally

C zero

D largest in the first branch

Understand It with Pulse | Flag a mistake

14 **Energy cannot be created or destroyed, only**

A measured

B transferred or transformed

C lost completely

D increased

Understand It with Pulse | Flag a mistake

15 **In a longitudinal wave, particles vibrate**

- A perpendicular to wave travel
- B in circles only
- C not at all
- D parallel to wave travel

Understand It with Pulse | Flag a mistake

16 **A boat travels 12 metres east then 5 metres north. Its displacement magnitude in metres is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **An object completes 10 revolutions in 20 seconds. Its frequency in hertz is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A transformer works with**

A alternating current

B direct current only

C static charge only

D batteries only

Understand It with Pulse | Flag a mistake

19 **A force of 12 newtons acts for 5 seconds. The impulse in newton seconds is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **Points of maximum motion in a standing wave are called**

- A nodes
- B crests only
- C troughs only
- D antinodes

Understand It with Pulse | Flag a mistake

21 **North 40 metres and south 15 metres combine to a net north displacement in metres of**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **Doubling the separation between two masses reduces gravitational force by a factor of**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A 100 watt bulb used for 2 hours uses energy in watt hours of**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A force of 25 newtons moves an object 4 metres. The work in joules is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **A wave travels 200 metres in 10 seconds. Its speed in metres per second is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **Two forces of 9 newtons east and 12 newtons north act on an object. The resultant force in newtons is**

ANSWER _____

Understand It with Pulse | Flag a mistake

27 **An object with period 4 seconds has frequency in hertz as a decimal is**

ANSWER

Understand It with Pulse | Flag a mistake

28 **A charge of 5 coulombs moves at 2 metres per second perpendicular to a magnetic field of 3 tesla. The magnetic force in newtons is**

ANSWER

Understand It with Pulse | Flag a mistake

29 **A machine does 1000 joules of work in 25 seconds. Its power in watts is**

ANSWER

Understand It with Pulse | Flag a mistake

30 **A wave has speed 150 metres per second and wavelength 5 metres. Its frequency in hertz is**

ANSWER

Understand It with Pulse | Flag a mistake

31 **A displacement of 8 metres east and 15 metres north has magnitude in metres equal to**

ANSWER

Understand It with Pulse | Flag a mistake

32 **An object moves in a circle at speed 30 metres per second with radius 15 metres. Its centripetal acceleration in metres per second squared is**

ANSWER

Understand It with Pulse | Flag a mistake

33 **A device uses 60 volts and 2 amperes. Its power in watts is**

ANSWER

Understand It with Pulse | Flag a mistake

34 **An object of mass 8 kilograms moving at 3 metres per second has momentum in kilogram metres per second of**

ANSWER

Understand It with Pulse | Flag a mistake

35 **A wave has speed 90 metres per second and wavelength 3 metres. Its frequency in hertz is**

ANSWER

Understand It with Pulse | Flag a mistake

36 **A unit vector has magnitude**

A 0

B 10

C the vector magnitude

D 1

Understand It with Pulse | Flag a mistake

37

Frequency and period are related by frequency equals

A period²

B 1/period

C period

D 2 π × period

Understand It with Pulse | Flag a mistake

38

A conductor allows charge to

A stay fixed

B be stored only

C be created

D flow easily

Understand It with Pulse | Flag a mistake

39 **An object of mass 5 kilograms moving at 6 metres per second has momentum in kilogram metres per second of**

ANSWER

Understand It with Pulse | Flag a mistake

40 **A wave has frequency 8 hertz and wavelength 5 metres. Its speed in metres per second is**

ANSWER

Understand It with Pulse | Flag a mistake

41 **East 50 metres and west 20 metres combine to a net east displacement in metres of**

ANSWER

Understand It with Pulse | Flag a mistake

42 **An object with period 2 seconds has frequency in hertz as a decimal is**

ANSWER

Understand It with Pulse | Flag a mistake

43 **A 60 watt bulb used for 5 hours uses energy in watt hours of**

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **Momentum is conserved in a closed system when**

A no external impulse acts

B energy is lost

C mass changes

D velocity is constant

Understand It with Pulse | Flag a mistake

45 **Resonance occurs when a driving frequency matches a**

A speed

B natural frequency

C wavelength

D amplitude

Understand It with Pulse | Flag a mistake

46 **Two forces of 20 newtons east and 21 newtons north act on an object. The resultant force in newtons is**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **A 2 kilogram object in circular motion at 6 metres per second with radius 4 metres needs centripetal force in newtons of**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **A current of 7 amperes flows for 10 seconds. The charge transferred in coulombs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **Work is done when a force causes**

A a change in mass

B a change in temperature only

C displacement in the force direction

D no displacement

Understand It with Pulse | Flag a mistake

50 **A wave has frequency 9 hertz and wavelength 4 metres. Its speed in metres per second is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	13	**18.**	A	**35.**	30
2.	7.5	**19.**	60	**36.**	D
3.	2	**20.**	D	**37.**	B
4.	16	**21.**	25	**38.**	D
5.	30	**22.**	0.25	**39.**	30
6.	C	**23.**	200	**40.**	40
7.	B	**24.**	100	**41.**	30
8.	A	**25.**	20	**42.**	0.5
9.	600	**26.**	15	**43.**	300
10.	A	**27.**	0.25	**44.**	A
11.	C	**28.**	30	**45.**	B
12.	C	**29.**	40	**46.**	29
13.	A	**30.**	30	**47.**	18
14.	B	**31.**	17	**48.**	70
15.	D	**32.**	60	**49.**	C
16.	13	**33.**	120	**50.**	36
17.	0.5	**34.**	24		

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