SASKATCHEWAN PHYSICS 30 · 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 **Increasing light frequency above the threshold increases the**

- A number of photons only
- B metal temperature only
- C energy of ejected electrons
- D electron mass

Understand It with Pulse | Flag a mistake

2 **For a projectile with no air resistance, horizontal velocity**

- A increases steadily
- B stays constant
- C decreases steadily
- D becomes zero at the top

Understand It with Pulse | Flag a mistake

3 **A mass of 2 kg moves at 10 m per second. Its kinetic energy, in joules, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Field lines for a positive charge point**

A toward the charge

B away from the charge

C in circles only

D downward only

Understand It with Pulse | Flag a mistake

5 **Ejection of electrons from a metal by light is called**

A quantum

B half life

C photoelectric effect

D radioactivity

Understand It with Pulse | Flag a mistake

6 **An object moving under gravity after being launched is called**

A centripetal force

B torque

C equilibrium

D projectile

Understand It with Pulse | Flag a mistake

7 **A collision where kinetic energy is not conserved is called**

A kinetic energy

B gravitational potential energy

C elastic potential energy

D inelastic collision

Understand It with Pulse | Flag a mistake

8 **Doubling the distance between two charges makes the electric force**

A one quarter as large

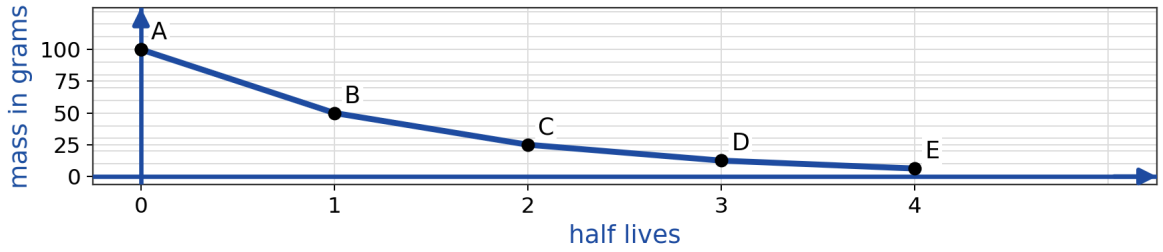
B twice as large

C four times as large

D unchanged

Understand It with Pulse | Flag a mistake

9 **The graph shows radioactive decay. The mass decreases**



A by half each half life

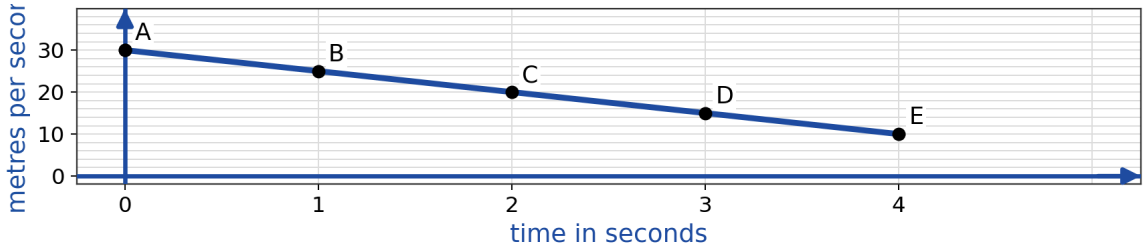
B by the same amount each time

C to zero at once

D by doubling

Understand It with Pulse | Flag a mistake

10 **The graph shows velocity against time for a projectile. The velocity at 2 seconds, in metres per second, is ____**



ANSWER _____

Understand It with Pulse | Flag a mistake

11 **Energy cannot be created or destroyed, only transferred is called**

- A momentum
- B impulse
- C elastic collision
- D conservation of energy

Understand It with Pulse | Flag a mistake

12 **A region where a magnet or moving charge feels a force is called**

- A Coulomb law
- B magnetic field
- C electric potential
- D current

Understand It with Pulse | Flag a mistake

13 **A sample starts at 80 g. After 2 half lives, the mass remaining, in grams, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A mass of 10 kg accelerates at 5 m per second squared. The net force, in newtons, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **Energy stored in a stretched or compressed spring is called**

A conservation of momentum

B elastic potential energy

C momentum

D impulse

Understand It with Pulse | Flag a mistake

16 **A student draws arrows around a magnet to show which way a compass needle would point. The lines she draws are called**

- A electric potential lines
- B current lines
- C resistance lines
- D field lines

Understand It with Pulse | Flag a mistake

17 **A photon has frequency 5×10^{14} hertz. Using Planck constant 6.63×10^{-34} joule seconds, its energy, in units of 10^{-19} joules, is about**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **An object starts at 0 m per second and accelerates at 2 m per second squared for 5 s. The displacement, in metres, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **Mass times velocity is called**

A elastic collision

B inelastic collision

C work energy theorem

D momentum

Understand It with Pulse | Flag a mistake

20 **Electric field strength is measured in**

A volts only

B amperes

C newtons per coulomb

D ohms

Understand It with Pulse | Flag a mistake

21 **Half life means after one half life, the amount remaining is**

A zero

B double

C half the original

D unchanged

Understand It with Pulse | Flag a mistake

22 **A mass of 20 kg accelerates at 3 m per second squared. The net force, in newtons, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Total momentum stays constant when no net external force acts is called**

- A impulse
- B conservation of momentum
- C elastic collision
- D inelastic collision

Understand It with Pulse | Flag a mistake

24 **Like charges**

- A repel each other
- B attract each other
- C have no force
- D always cancel

Understand It with Pulse | Flag a mistake

25 **Splitting of a heavy nucleus into lighter nuclei is called**

A energy level

B photon

C fission

D photoelectric effect

Understand It with Pulse | Flag a mistake

26 **A sloped surface is called**

A friction

B incline

C free body diagram

D vector

Understand It with Pulse | Flag a mistake

27 **A mass of 10 kg moves at 5 m per second. Its momentum, in kg m per second, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **A voltage of 18 V is applied across a resistance of 3 ohms. The current, in amperes, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **Which of the following is evidence that electrons have wave properties**

A electron diffraction patterns

B electrons having mass

C electrons having charge

D electrons orbiting in circles

Understand It with Pulse | Flag a mistake

30 **An object starts at 10 m per second and accelerates at 2 m per second squared for 3 s. The displacement, in metres, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **A mass of 4 kg is lifted 5 m . Using g = 9.8 m per second squared , its gain in gravitational potential energy , in joules , is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **A device uses 24 V and 3 A. Its power, in watts, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **A allowed energy state of an electron in an atom is called**

A energy level

B photoelectric effect

C wave particle duality

D quantum

Understand It with Pulse | Flag a mistake

34 **A representation showing all forces acting on an object is called**

A free body diagram

B projectile

C centripetal acceleration

D centripetal force

Understand It with Pulse | Flag a mistake

35 **A mass of 2 kg is lifted 20 m . Using g = 9.8 m per second squared , its gain in gravitational potential energy , in joules , is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **A current of 2 A flows through a resistance of 20 ohms. The voltage, in volts, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **A sample starts at 144 g. After 1 half life, the mass remaining, in grams, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **An object speeds up from 10 m per second to 30 m per second in 4 s. The acceleration, in metres per second squared, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

39 **A mass of 5 kg moves at 10 m per second. Its momentum, in kg m per second, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **A current of 5 A flows through a resistance of 4 ohms. The voltage, in volts, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **Light has frequency 6×10^{14} Hz . Using Planck constant 6.63×10^{-34} J s , the photon energy is about ____ $\times 10^{-19}$ J**

ANSWER _____

Understand It with Pulse | Flag a mistake

42 **An object starts at 5 m per second and accelerates at 4 m per second squared for 2 s. The displacement, in metres, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

43 **A mass of 6 kg moves at 4 m per second. Its kinetic energy, in joules, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **A device uses 18 V and 2 A. Its power, in watts, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **A sample starts at 80 g. After 3 half lives, the mass remaining, in grams, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **A mass of 12 kg accelerates at 5 m per second squared. The net force, in newtons, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **A mass of 10 kg moves at 4 m per second. Its kinetic energy, in joules, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **A device uses 20 V and 4 A. Its power, in watts, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

49 **Light has frequency 7×10^{14} Hz . Using Planck constant 6.63×10^{-34} J s , the photon energy is about _____ $\times 10^{-19}$ J**

ANSWER _____

Understand It with Pulse | Flag a mistake

50 **A mass of 6 kg accelerates at 7 m per second squared. The net force, in newtons, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**18.**	25	**35.**	392
2.	B	**19.**	D	**36.**	40
3.	100	**20.**	C	**37.**	72
4.	B	**21.**	C	**38.**	5
5.	C	**22.**	60	**39.**	50
6.	D	**23.**	B	**40.**	20
7.	D	**24.**	A	**41.**	3.98
8.	A	**25.**	C	**42.**	18
9.	A	**26.**	B	**43.**	48
10.	20	**27.**	50	**44.**	36
11.	D	**28.**	6	**45.**	10
12.	B	**29.**	A	**46.**	60
13.	20	**30.**	39	**47.**	80
14.	50	**31.**	196	**48.**	80
15.	B	**32.**	72	**49.**	4.64
16.	D	**33.**	A	**50.**	42
17.	3.31	**34.**	A		

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