QUEBEC PHYSICS, SECONDARY V · 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 starts at 3 metres per second and accelerates at 2 metres per second squared for 5 seconds. Its final speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A mass of 4 kilograms moves at 5 metres per second. Its momentum, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A mass of 2 kilograms moves at 6 metres per second. Its kinetic energy, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A light ray strikes a plane mirror at an angle of incidence of 30 degrees. Its angle of reflection, in degrees, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **An object starts from rest and accelerates at 2 metres per second squared over 16 metres. Its final speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A free body diagram shows all the forces acting on**

A two objects

B the ground only

C one object

D the air only

Understand It with Pulse | Flag a mistake

7 **A falling object moves faster as it loses gravitational potential**

A energy

B mass

C force

D speed

Understand It with Pulse | Flag a mistake

8 **A concave mirror can form a real inverted image when the object is beyond the**

A mirror surface

B centre of curvature only

C focal point

D lens

Understand It with Pulse | Flag a mistake

9 **If position increases by equal amounts in equal time intervals, the motion is at**

A acceleration

B constant velocity

C force

D gravity

Understand It with Pulse | Flag a mistake

10 **An object in uniform circular motion has constant speed but changing**

A mass

B velocity

C force

D energy

Understand It with Pulse | Flag a mistake

11 **A pendulum at its lowest point has maximum kinetic and minimum potential**

- A energy
- B mass
- C force
- D height

Understand It with Pulse | Flag a mistake

12 **A diverging lens is thinner in the middle and always forms a virtual upright image that is**

- A larger
- B smaller
- C inverted
- D real

Understand It with Pulse | Flag a mistake

13 **Average velocity equals total displacement divided by total**

A time

B mass

C force

D energy

Understand It with Pulse | Flag a mistake

14 **Equilibrium means the net force on an object is**

A maximum

B negative

C doubled

D zero

Understand It with Pulse | Flag a mistake

15 **Gravitational potential energy depends on mass, gravity and**

A speed

B force

C height

D time

Understand It with Pulse | Flag a mistake

16 **A ray of light travels from glass of index 1.5 into air of index 1.0. The ratio of the indices, glass to air, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **Free fall near Earth means the only force acting is**

A friction

B air pressure

C magnetism

D gravity

Understand It with Pulse | Flag a mistake

18 **Inertia is the tendency of an object to resist a change in its**

A colour

B temperature

C mass

D motion

Understand It with Pulse | Flag a mistake

19 **Kinetic energy depends on mass and the square of**

- A force
- B speed
- C height
- D time

Understand It with Pulse | Flag a mistake

20 **A light ray passes from air into glass. The sine of the angle of incidence is 0.6 and the sine of the angle of refraction is 0.4. The index of refraction of the glass is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **An object speeds up from 10 metres per second to 30 metres per second in 5 seconds. Its acceleration, in metres per second squared, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **Newton first law states that an object stays at rest or in uniform motion unless acted on by a net**

- A force
- B mass
- C colour
- D temperature

Understand It with Pulse | Flag a mistake

23 **A spring has force constant 200 newtons per metre and is stretched 0.2 metres. Its elastic potential energy, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **An object is 20 centimetres from a mirror of focal length 10 centimetres. Its image distance, in centimetres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **An object starts from rest and accelerates at 3 metres per second squared over 24 metres. Its final speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **A mass of 2 kilograms moves at 10 metres per second. Its momentum, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

27 **A force of 30 newtons pushes an object 3 metres in the direction of the force. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **A light ray strikes a plane mirror at an angle of incidence of 60 degrees. Its angle of reflection, in degrees, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **An object starts at 0 metres per second and accelerates at 4 metres per second squared for 3 seconds. The distance travelled, in metres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

30 **A mass of 6 kilograms moves at 3 metres per second. Its momentum, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **A force of 50 newtons pushes an object 2 metres in the direction of the force. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **An object is 12 centimetres from a mirror of focal length 6 centimetres. Its image distance, in centimetres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **For distance against time, the slope gives the**

A acceleration

B force

C mass

D speed

Understand It with Pulse | Flag a mistake

34 **Static friction acts before motion starts and kinetic friction acts during**

A melting

B heating

C sliding

D colouring

Understand It with Pulse | Flag a mistake

35 **Power is the rate at which work is done or energy is**

A stored

B transferred

C coloured

D weighed

Understand It with Pulse | Flag a mistake

36 **Dispersion is the separation of white light into colours because index of refraction depends on**

A brightness

B temperature

C mass

D wavelength

Understand It with Pulse | Flag a mistake

37 **Speed is a scalar quantity while velocity is a**

A scalar quantity

B constant quantity

C vector quantity

D zero quantity

Understand It with Pulse | Flag a mistake

38 **The normal force on a horizontal plane acts perpendicular to the**

A surface

B gravity

C motion

D friction

Understand It with Pulse | Flag a mistake

39 **The area under a force-against-extension curve for a spring gives the elastic potential energy**

A lost

B coloured

C weighed

D stored

Understand It with Pulse | Flag a mistake

40 **Light bends away from the normal when it enters a medium with a lower index of**

A reflection

B absorption

C refraction

D colour

Understand It with Pulse | Flag a mistake

41 **The SI unit of acceleration is metres per second**

A squared

B cubed

C only

D per hour

Understand It with Pulse | Flag a mistake

42 **Use g = 9.8 metres per second squared . A block of mass 10 kilograms rests on a surface with coefficient of friction 0.5 . The maximum static friction force , in newtons , is**

ANSWER _____

Understand It with Pulse | Flag a mistake

43 **The SI unit of power is the**

A joule

B newton

C watt

D pascal

Understand It with Pulse | Flag a mistake

44 **Snell law relates the indices and the sines of the angles of incidence and**

A refraction

B reflection

C diffraction

D dispersion

Understand It with Pulse | Flag a mistake

45 **Uniform motion means motion at constant**

A force

B mass

C velocity

D energy

Understand It with Pulse | Flag a mistake

46 **When forces on an object balance, its acceleration is**

A maximum

B negative

C positive

D zero

Understand It with Pulse | Flag a mistake

47 **Use g = 9.8 metres per second squared . A mass of 4 kilograms at height 3 metres has gravitational potential energy , in joules , of**

ANSWER

Understand It with Pulse | Flag a mistake

48 **For a ray hitting a mirror, the angle of incidence equals the angle of**

A refraction

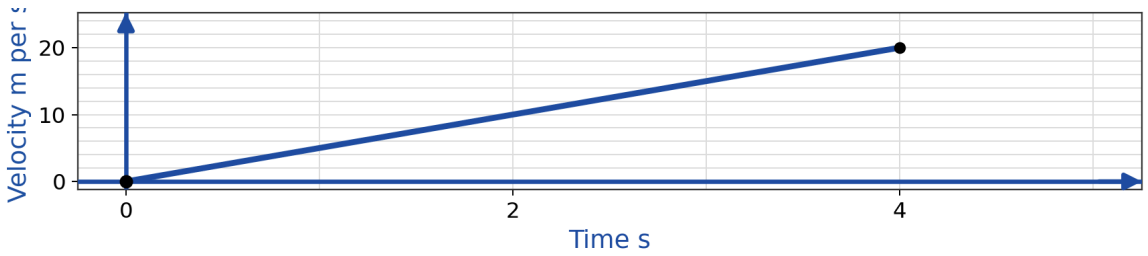
B reflection

C diffraction

D dispersion

Understand It with Pulse | Flag a mistake

49 **The graph shows velocity against time. The displacement from 0 seconds to 4 seconds, in metres, is**



ANSWER

Understand It with Pulse | Flag a mistake

50 **Use g = 9.8 metres per second squared . A block of mass 5 kilograms rests on a surface with coefficient of friction 0.2 . The maximum static friction force , in newtons , is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	13	**18.**	D	**35.**	B
2.	20	**19.**	B	**36.**	D
3.	36	**20.**	1.5	**37.**	C
4.	30	**21.**	4	**38.**	A
5.	8	**22.**	A	**39.**	D
6.	C	**23.**	4	**40.**	C
7.	A	**24.**	20	**41.**	A
8.	C	**25.**	12	**42.**	49
9.	B	**26.**	20	**43.**	C
10.	B	**27.**	90	**44.**	A
11.	A	**28.**	60	**45.**	C
12.	B	**29.**	18	**46.**	D
13.	A	**30.**	18	**47.**	117.6
14.	D	**31.**	100	**48.**	B
15.	C	**32.**	12	**49.**	40
16.	1.5	**33.**	D	**50.**	9.8
17.	D	**34.**	C		

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