QUEBEC PHYSICS, SECONDARY V · UNIT B

Dynamics — Practice Test

Quebec Physics, Secondary V • 25 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 bowling ball of mass 2 kilograms accelerates at 4 metres per second squared. The net force, in newtons, 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 in a circle of radius 3 metres at speed 6 metres per second. The centripetal force, in newtons, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A force of 20 newtons acts for 3 seconds. The impulse delivered, in newton seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A free body diagram shows all the forces acting on a wagon**



A two objects

B the ground only

C one object

D the air only

Understand It with Pulse | Flag a mistake

6 **A larger net force on the same mass produces a larger**

- A mass
- B velocity only
- C acceleration
- D colour

Understand It with Pulse | Flag a mistake

7 **A mass of 2 kilograms changes speed from 4 metres per second to 10 metres per second. Its momentum change, in kilogram metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **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

9 **Centripetal acceleration always points toward the centre of the circular**

- A path
- B object
- C force
- D mass

Understand It with Pulse | Flag a mistake

10 **For a race car going around a bend, centripetal force always points toward the centre of the**



A object

B ground

C sky

D circle

Understand It with Pulse | Flag a mistake

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

A maximum

B negative

C doubled

D zero

Understand It with Pulse | Flag a mistake

12 **Friction opposes the relative motion or attempted motion between**

A colours

B surfaces in contact

C masses

D temperatures

Understand It with Pulse | Flag a mistake

13 **Impulse equals the change in**

A mass

B momentum

C energy

D velocity only

Understand It with Pulse | Flag a mistake

14 **Inertia is the tendency of a rock to resist a change in its**



A colour

B temperature

C mass

D motion

Understand It with Pulse | Flag a mistake

15 **Mass is a measure of an objects**

A inertia

B weight

C volume

D colour

Understand It with Pulse | Flag a mistake

16 **Momentum is conserved in a closed system when no external net**

A force acts

B mass acts

C colour acts

D heat acts

Understand It with Pulse | Flag a mistake

17 **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

18 **Newton second law states that net force equals mass times**

A velocity

B acceleration

C energy

D momentum

Understand It with Pulse | Flag a mistake

19 **Newton third law states that forces always occur in equal and opposite**

A singles

B triples

C pairs

D squares

Understand It with Pulse | Flag a mistake

20 **A wooden crate of mass 5 kilograms accelerates at 3 metres per second squared. The net force, in newtons, is**



ANSWER

Understand It with Pulse | Flag a mistake

21 **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

22 **A mass of 4 kilograms moves in a circle of radius 3 metres at speed 3 metres per second. The centripetal force, in newtons, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A mass of 10 kilograms accelerates at 2 metres per second squared. The net force, in newtons, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **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

25 **A red rubber ball of mass 3 kilograms moves in a circle of radius 2 metres at speed 4 metres per second. The centripetal force, in newtons, is**



ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	8	**10.**	D	**19.**	C
2.	20	**11.**	D	**20.**	15
3.	24	**12.**	B	**21.**	20
4.	60	**13.**	B	**22.**	12
5.	C	**14.**	D	**23.**	20
6.	C	**15.**	A	**24.**	18
7.	12	**16.**	A	**25.**	24
8.	B	**17.**	A		
9.	A	**18.**	B		

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