MANITOBA PHYSICS 40S · UNIT A · 25 QUESTIONS

Mechanics — 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 **A race car starts at 3 metres per second and accelerates at 2 metres per second squared for 3 seconds. Its final speed, in metres per second, is**



ANSWER

Understand It with Pulse | Flag a mistake

2 **A mass of 8 kilograms accelerates at 2 metres per second squared. The net force, in newtons, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A mass of 4 kilograms moves at 4 metres per second. Its kinetic energy, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Use g = 10 metres per second squared . A mass of 4 kilograms at height 2 metres has gravitational potential energy , in joules , of**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A wave has frequency 35 hertz and wavelength 6 metres. Its speed, in metres per second, is**



ANSWER _____

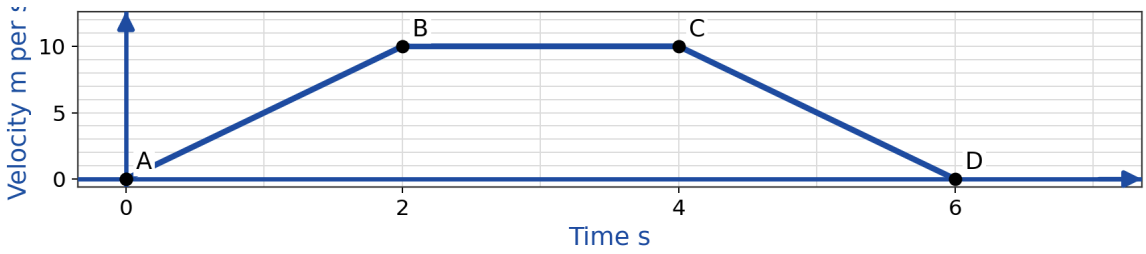
Understand It with Pulse | Flag a mistake

6 **A current of 6 amperes flows through a resistor of 8 ohms. The voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **The graph shows velocity against time. The displacement from 0 seconds to 6 seconds, in metres, is**



ANSWER

Understand It with Pulse | Flag a mistake

8 **An object travels 80 metres in 2 seconds. Its speed, in metres per second, is**

ANSWER

Understand It with Pulse | Flag a mistake

9 **An object starts at 3 metres per second and accelerates at 5 metres per second squared for 3 seconds. Its final speed, in metres per second, is**

ANSWER

Understand It with Pulse | Flag a mistake

10 **A wooden crate with a mass of 6 kilograms accelerates at 4 metres per second squared. The net force, in newtons, is**



ANSWER

Understand It with Pulse | Flag a mistake

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

ANSWER

Understand It with Pulse | Flag a mistake

12 **Use g = 10 metres per second squared . A mass of 6 kilograms at height 2 metres has gravitational potential energy , in joules , of**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A wave has frequency 35 hertz and wavelength 4 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A current of 2 amperes flows through a resistor of 6 ohms. The voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A car travels 200 metres in 2 seconds. Its speed, in metres per second, is**



ANSWER

Understand It with Pulse | Flag a mistake

16 **The powerhouse of the cell, where energy is released, is the**

A mitochondrion

B nucleus

C ribosome

D vacuole

Understand It with Pulse | Flag a mistake

17 **The control centre of the cell, holding genetic material, is the**

A mitochondrion

B nucleus

C chloroplast

D membrane

Understand It with Pulse | Flag a mistake

18 **The organelle where photosynthesis happens in plant cells is the**

A mitochondrion

B nucleus

C chloroplast

D vacuole

Understand It with Pulse | Flag a mistake

19 **The basic unit of life is the**

A organ

B tissue

C organism

D cell

Understand It with Pulse | Flag a mistake

20 **The process by which plants make food using sunlight is**



A photosynthesis

B respiration

C fermentation

D digestion

Understand It with Pulse | Flag a mistake

21 **The process that releases energy from food in cells is**

A photosynthesis

B cellular respiration

C osmosis

D diffusion

Understand It with Pulse | Flag a mistake

22 **The molecule that carries genetic instructions is**

A RNA only

B protein only

C DNA

D glucose

Understand It with Pulse | Flag a mistake

23 **A change in the genetic material of an organism is a**

- A adaptation
- B variation
- C selection
- D mutation

Understand It with Pulse | Flag a mistake

24 **The passing of traits from parents to offspring is**

- A heredity
- B evolution
- C homeostasis
- D metabolism

Understand It with Pulse | Flag a mistake

25 **The maintenance of a stable internal environment is**

A photosynthesis

B homeostasis

C fermentation

D osmosis

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	9	**10.**	24	**19.**	D
2.	16	**11.**	4	**20.**	A
3.	32	**12.**	120	**21.**	B
4.	80	**13.**	140	**22.**	C
5.	210	**14.**	12	**23.**	D
6.	48	**15.**	100	**24.**	A
7.	40	**16.**	A	**25.**	B
8.	40	**17.**	B		
9.	18	**18.**	C		

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