MANITOBA PHYSICS 30S · UNIT A · 25 QUESTIONS

Waves — 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 **Use g = 10 metres per second squared . A large grey rock with a mass of 6 kilograms rests on a rocky ledge 2 metres above the ground. Its gravitational potential energy , in joules , is**



ANSWER

Understand It with Pulse | Flag a mistake

2 **A wave has frequency 15 hertz and wavelength 2 metres. Its speed, in metres per second, is**

ANSWER

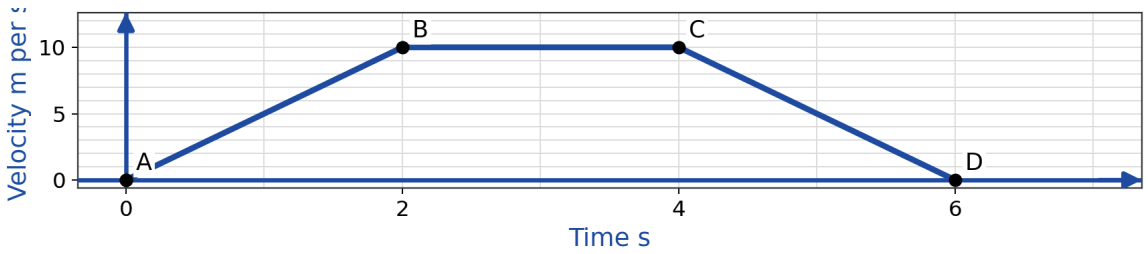
Understand It with Pulse | Flag a mistake

3 **A current of 2 amperes flows through a resistor of 9 ohms. The voltage, in volts, is**

ANSWER

Understand It with Pulse | Flag a mistake

4 **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

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



ANSWER

Understand It with Pulse | Flag a mistake

6 **An object starts at 7 metres per second and accelerates at 6 metres per second squared for 3 seconds. Its final speed, in metres per second, is**

ANSWER

Understand It with Pulse | Flag a mistake

7 **A mass of 2 kilograms accelerates at 6 metres per second squared. The net force, in newtons, is**

ANSWER

Understand It with Pulse | Flag a mistake

8 **A mass of 8 kilograms moves at 6 metres per second. Its kinetic energy, in joules, is**

ANSWER

Understand It with Pulse | Flag a mistake

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

ANSWER

Understand It with Pulse | Flag a mistake

10 An ocean wave has frequency 15 hertz and wavelength 5 metres. Its speed, in metres per second, is



ANSWER

Understand It with Pulse | Flag a mistake

11 A current of 4 amperes flows through a resistor of 7 ohms. The voltage, in volts, is

ANSWER

Understand It with Pulse | Flag a mistake

12 **An object travels 120 metres in 4 seconds. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **An object travels 160 metres in 5 seconds. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **An object starts at 7 metres per second and accelerates at 4 metres per second squared for 3 seconds. Its final speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A wooden crate with 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

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.	120	**10.**	75	**19.**	D
2.	30	**11.**	28	**20.**	A
3.	18	**12.**	30	**21.**	B
4.	40	**13.**	32	**22.**	C
5.	100	**14.**	19	**23.**	D
6.	25	**15.**	20	**24.**	A
7.	12	**16.**	A	**25.**	B
8.	144	**17.**	B		
9.	40	**18.**	C		

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