MANITOBA SCIENCE 20F · 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 **On a map, 1 unit represents 35 units in real life. A map distance of 7 represents a real distance of**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A sample of ammonia has mass 102 grams. Its molar mass is 17 grams per mole. The amount, in moles, 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 **A slope rises 100 units over a run of 20 units. Its gradient is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A sample has 50 parts out of 100 in total. The percent is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A solution has hydrogen ion concentration $10^{-}9$ moles per litre . Its pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A mass of 8 kilograms accelerates at 6 metres per second squared. The net force, in newtons, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A region has population 10000 and area 50 units². Its population density is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **On a map, 1 unit represents 25 units in real life. A map distance of 5 represents a real distance of**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A sample of water has mass 54 grams. Its molar mass is 18 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **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

12 **The mean of temperatures 7, 9, 11, and 13 degrees is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A sample has 30 parts out of 100 in total. The percent is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A solution has hydrogen ion concentration $10^{-}7$ moles per litre . Its pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A region has population 6000 and area 30 units². Its population density is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **On a map, 1 unit represents 15 units in real life. A map distance of 3 represents a real distance of**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A sample of carbon dioxide has mass 176 grams. Its molar mass is 44 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

A RNA only

B protein only

C DNA

D glucose

Understand It with Pulse | Flag a mistake

20 **The chemical symbol for water is**

A CO_2

B O_2

C NaCl

D H_2O

Understand It with Pulse | Flag a mistake

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

- A organ
- B tissue
- C organism
- D cell

Understand It with Pulse | Flag a mistake

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

- A respiration
- B fermentation
- C photosynthesis
- D digestion

Understand It with Pulse | Flag a mistake

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

A photosynthesis

B homeostasis

C fermentation

D osmosis

Understand It with Pulse | Flag a mistake

24 **The gas released by plants during photosynthesis is**

A carbon dioxide

B nitrogen

C oxygen

D hydrogen

Understand It with Pulse | Flag a mistake

25 **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

26 **The organ where oxygen enters the blood is the**

A heart

B liver

C lung

D stomach

Understand It with Pulse | Flag a mistake

27 **A wave has frequency 35 hertz and wavelength 3 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **The speed of light in a vacuum is about**

A 150000 kilometres per second

B 300000 kilometres per second

C 300 kilometres per second

D 3000 kilometres per second

Understand It with Pulse | Flag a mistake

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

A heredity

B evolution

C homeostasis

D metabolism

Understand It with Pulse | Flag a mistake

30 **The organ that pumps blood around the body is the**

A liver

B heart

C lung

D kidney

Understand It with Pulse | Flag a mistake

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

ANSWER

Understand It with Pulse | Flag a mistake

32 **A temperature of 30 degrees Celsius converts to Fahrenheit as**

ANSWER

Understand It with Pulse | Flag a mistake

33 **A sample has 60 parts out of 100 in total. The percent is**

ANSWER

Understand It with Pulse | Flag a mistake

34 **A solution has hydrogen ion concentration $10^{-}2$ moles per litre . Its pH is**

ANSWER

Understand It with Pulse | Flag a mistake

35 **A mass of 6 kilograms moves at 4 metres per second. Its kinetic energy, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **A slope rises 80 units over a run of 10 units. Its gradient is**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **On a map, 1 unit represents 30 units in real life. A map distance of 6 represents a real distance of**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **A sample of water has mass 108 grams. Its molar mass is 18 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

39 **A current of 3 amperes flows through a resistor of 7 ohms. The voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **A temperature of 20 degrees Celsius converts to Fahrenheit as**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **The mean of temperatures 2, 4, 6, and 8 degrees is**

ANSWER _____

Understand It with Pulse | Flag a mistake

42 **A sample of water has amount 3 moles and molar mass 18 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

43 **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

44 **The movement of water across a partially permeable membrane is**

A osmosis

B diffusion

C active transport

D photosynthesis

Understand It with Pulse | Flag a mistake

45 **The gas plants absorb from the air for photosynthesis is**

- A oxygen
- B carbon dioxide
- C nitrogen
- D hydrogen

Understand It with Pulse | Flag a mistake

46 **The unit of power is the**

- A joule
- B newton
- C watt
- D ampere

Understand It with Pulse | Flag a mistake

47 **The unit of voltage is the**

A ampere

B ohm

C volt

D watt

Understand It with Pulse | Flag a mistake

48 **The process of water changing from liquid to gas is**

A condensation

B freezing

C melting

D evaporation

Understand It with Pulse | Flag a mistake

49 **A neutral solution has a pH of**

A 7

B 0

C 14

D 1

Understand It with Pulse | Flag a mistake

50 **The unit of energy is the**

A newton

B joule

C watt

D volt

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	245	**18.**	4	**35.**	48
2.	6	**19.**	C	**36.**	8
3.	18	**20.**	D	**37.**	180
4.	5	**21.**	D	**38.**	6
5.	50	**22.**	C	**39.**	21
6.	9	**23.**	B	**40.**	68
7.	48	**24.**	C	**41.**	5
8.	200	**25.**	B	**42.**	54
9.	125	**26.**	C	**43.**	D
10.	3	**27.**	105	**44.**	A
11.	210	**28.**	B	**45.**	B
12.	10	**29.**	A	**46.**	C
13.	30	**30.**	B	**47.**	C
14.	7	**31.**	32	**48.**	D
15.	40	**32.**	86	**49.**	A
16.	200	**33.**	60	**50.**	B
17.	45	**34.**	2		

© 2026 Brett Robbins. All Rights Reserved.