NOVA SCOTIA ADVANCED BIOLOGY 12 · UNIT A

Maintaining Dynamic Equilibrium II — Practice Test

Nova Scotia Advanced Biology 12 • 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 **An athlete heart beats 90 times in 75 seconds. The heart rate, in beats per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **An athlete heart beats 126 times in 90 seconds. The heart rate, in beats per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **An athlete heart beats 105 times in 75 seconds. The heart rate, in beats per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A resting person takes 27 breaths in 90 seconds. The breathing rate, in breaths per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A resting person takes 50 breaths in 150 seconds. The breathing rate, in breaths per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A resting person takes 33 breaths in 110 seconds. The breathing rate, in breaths per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A nerve impulse travels 240 metres in 2 seconds. The conduction speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A nerve impulse travels 75 metres in 0.6 seconds. The conduction speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A nerve impulse travels 132 metres in 1.1 seconds. The conduction speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A kidney filters 240 litres of fluid in a day and reabsorbs 99 percent of it. The urine volume, in litres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A kidney filters 300 litres of fluid in a day and reabsorbs 98 percent of it. The urine volume, in litres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A kidney filters 160 litres of fluid in a day and reabsorbs 98 percent of it. The urine volume, in litres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A hormone sample starts at 320 units. After 4 half lives the amount left, in units, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A hormone sample starts at 192 units. After 3 half lives the amount left, in units, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A hormone sample starts at 400 units. After 4 half lives the amount left, in units, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A tissue sample has a mass of 120 grams. After absorbing water its mass is 150 grams. The percent gain in mass is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A tissue sample has a mass of 90 grams. After absorbing water its mass is 99 grams. The percent gain in mass is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A tissue sample has a mass of 75 grams. After absorbing water its mass is 90 grams. The percent gain in mass is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **During an action potential the inside of the axon first becomes**

A positive as sodium enters

B negative as sodium enters

C positive as potassium enters

D unchanged

Understand It with Pulse | Flag a mistake

20 **The sodium potassium pump restores a neuron by**

A moving sodium in and potassium out

B moving sodium out and potassium in

C moving calcium out only

D opening all channels

Understand It with Pulse | Flag a mistake

21 **In diabetes mellitus type 1 the main problem is**

A insulin resistance only

B excess glucagon only

C little or no insulin production

D kidney failure only

Understand It with Pulse | Flag a mistake

22 **The loop of Henle in the nephron mainly creates**

A urine directly

B blood cells

C glucose for the body

D a salt concentration gradient in the medulla

Understand It with Pulse | Flag a mistake

23 **A complete feedback loop must include a receptor, a control centre and**

- **A** an effector
- **B** a second hormone
- **C** a nerve only
- **D** a muscle only

Understand It with Pulse | Flag a mistake

24 **Thyroxine controls body metabolism and its release is regulated by**

- **A** positive feedback only
- **B** negative feedback from the pituitary
- **C** the kidney
- **D** the pancreas

Understand It with Pulse | Flag a mistake

25 **When blood water falls, ADH release rises and urine becomes**

A more dilute and larger in volume

B unchanged

C more concentrated and smaller in volume

D more concentrated and larger in volume

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	72	**10.**	2.4	**19.**	A
2.	84	**11.**	6	**20.**	B
3.	84	**12.**	3.2	**21.**	C
4.	18	**13.**	20	**22.**	D
5.	20	**14.**	24	**23.**	A
6.	18	**15.**	25	**24.**	B
7.	120	**16.**	25	**25.**	C
8.	125	**17.**	10		
9.	120	**18.**	20		

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