

Behavioural Economics and Human Health

Behavioural Economics · Answer Key · 18 Questions

1. Which part of the human brain is most closely associated with processing rewards and influencing decision-making in behavioural economics?

- A) Cerebellum
- B) Prefrontal cortex**
- C) Medulla oblongata
- D) Occipital lobe

2. What is the primary chemical neurotransmitter in the brain that regulates the feeling of pleasure and motivates goal-oriented behaviour?

- A) Dopamine**
- B) Adrenaline
- C) Insulin
- D) Melatonin

3. In behavioural economics, the 'present bias' refers to the human tendency to prioritize immediate rewards over long-term health. Which bodily organ is the primary site for glucose metabolism?

- A) Heart
- B) Lungs
- C) Liver**
- D) Kidney

4. Which sleep-related hormone is often disrupted by the blue light emitted from digital devices, affecting cognitive decision-making?

- A) Cortisol
- B) Melatonin**
- C) Serotonin
- D) Thyroxin

5. What is the average number of hours of sleep recommended for optimal cognitive functioning and healthy decision-making in adults?

- A) 2-4 hours
- B) 7-9 hours**
- C) 12-14 hours
- D) 15+ hours

6. Dehydration is known to impair cognitive performance. Roughly what percentage of the average human adult body is composed of water?

- A) 20%
- B) 40%
- C) 60%**
- D) 90%

7. Which physiological state, often ignored in economic modeling, involves the body's 'fight or flight' response triggered by the amygdala?

- A) Homeostasis
- B) Stress**
- C) Digestion
- D) Sleep cycle

8. Which human organ consumes approximately 20% of the body's total energy despite accounting for only about 2% of body weight?

- A) Brain**
- B) Heart
- C) Lungs
- D) Skin

9. How many bones are in the average adult human skeleton, providing the physical structure that enables us to act on our economic choices?

- A) 102
- B) 206**
- C) 304
- D) 412

10. What is the primary function of the prefrontal cortex in human decision-making?

- A) Regulating body temperature
- B) Executive function and planning**
- C) Controlling heart rate
- D) Managing digestion

11. Which sense is most closely linked to the brain's emotional memory and can influence consumer behaviour through scent?

- A) Olfactory (smell)**
- B) Gustatory (taste)
- C) Tactile (touch)
- D) Auditory (hearing)

12. What is the term for the biological clock that regulates the sleep-wake cycle in humans?

A) Circadian rhythm

- B) Metabolic rate
- C) Homeostasis
- D) Synaptic pruning

13. In health economics, physical activity is known to release endorphins. What type of molecule are endorphins?

A) Carbohydrates

B) Proteins/Peptides

- C) Lipids
- D) Nucleic acids

14. Which mineral is essential for proper nerve impulse transmission and muscle contraction in the human body?

A) Calcium

- B) Iron
- C) Gold
- D) Copper

15. What is the standard unit used to measure the energy content of food, which influences consumer caloric choices?

A) Kilojoules

- B) Celsius
- C) Decibels
- D) Watts

16. The 'gut-brain axis' refers to the communication between the central nervous system and which part of the body?

A) Enteric nervous system

- B) Skeletal system
- C) Respiratory system
- D) Integumentary system

17. Which vitamin is primarily produced in the skin when exposed to sunlight and is linked to mood regulation?

A) Vitamin A

B) Vitamin C

C) Vitamin D

D) Vitamin K

18. What is the approximate normal resting heart rate for a healthy adult, which can fluctuate under stressful decision-making conditions?

A) 20-40 bpm

B) 60-100 bpm

C) 120-150 bpm

D) 180-200 bpm