Physiology INICET-May 2025 (Reworked)

Subject: Physiology
Topic: EEG Waves
Question Number: 1
Clinical Question:
When a patient opens their eyes after keeping them closed, which EEG wave activity decreases?

Options:
A) Alpha wave
B) Theta wave
C) Beta wave
D) Delta wave

Correct Answer: A) Alpha wave

Subject: Physiology
Topic: Cell Junctions
Question Number: 2
Non-clinical Question:
In which part of the cell are tight junctions located?

Options:
A) Apical
B) Apicolateral
C) Basal
D) Basolateral

Correct Answer: B) Apicolateral

Subject: Physiology
Topic: Regulation of Fever
Question Number: 3
Non-clinical Question:
The fever caused during an infection is regulated by which part of the brain:

Options:
A) Paraventricular nucleus of hypothalamus
B) Dorsal nucleus of hypothalamus
C) Amygdala
D) Pre-optic area of Hypothalamus

Correct Answer: D) Pre-optic area of Hypothalamus

Subject: Physiology
Topic: Frank–Starling Law
Question Number: 4
Non-clinical Question:
Among which of the following pulses is based on the Frank–Starling law?

Options:

A) Pulsus bisferiens
B) Pulsus paradoxus
C) Pulsus alterans
D) Pulsus parvus

Correct Answer: C) Pulsus alternans

Subject: Physiology
Topic: Acid-Base Changes
Question Number: 5
Non-clinical Question:
While a person rapid ascent to high altitude leads to which acid – base :

Options:

A) Respiratory alkalosis
B) Metabolic alkalosis
C) Respiratory acidosis
D) Metabolic acidosis

Correct Answer: A) Respiratory alkalosis

Subject: Physiology
Topic: Muscle Physiology
Question Number: 6
Non-clinical Question: What is the tetanizing frequency if the muscle contraction period is 40 milliseconds?

Options:

A) 20 Hz
B) 40 Hz
C) 25 Hz
D) 50 Hz

Correct Answer: C) 25 Hz

Subject: Physiology
Topic: Antidiuretic Hormone (ADH)
Question Number: 7
Non-clinical Question:
All the following are mechanisms of action of antidiuretic hormone (ADH) EXCEPT?

Options:

A) Increase absorption of urea in the medullary collecting duct
B) Increase absorption of urea in the descending loop of Henle
C) Decrease absorption of NaCl in the ascending loop of Henle
D) Increase water permeability in the collecting ducts

Correct Answer: B) Increase absorption of urea in the descending loop of Henle

Subject: Physiology
Topic: Reflexes of the Heart
Question Number: 8
Non-clinical Question:
Which of the following features are seen in the Bezold–Jarisch reflex?

1. Hypotension
2. Bradycardia
3. Bradypnoea
4. Tachycardia

Options:

A) 1, 2
B) 1, 2, 3
C) 3, 4
D) 1, 4

Correct Answer: B) 1, 2, 3

Subject: Physiology
Topic: Feed-forward and Feedback Mechanisms
Question Number: 9
Non-clinical Question:
Which of the following is an example of a feed-forward mechanism?

Options:

A) Vasoconstriction on exposure to cold
B) Increase in heart rate on standing from supine position
C) Increase in cardiac output in response to anemia
D) Temperature regulation

Correct Answer: D) Temperature regulation

Subject: Physiology
Topic: Surfactant & Surface Tension
Question Number: 10
Non-clinical Question:
In which of the following processes, surface tension in alveoli is increased?

Options:

A) Inspiration
B) Expiration
C) Stands from supine position
D) Goes from standing to supine position

Correct Answer: A) Inspiration

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