1. Alex is playing a video game that requires both shooting enemies and collecting items. Suddenly, a new wave of enemies appears, and he struggles to switch to collecting items. Which cognitive process is evident in this delay?
    a) Involuntary attention
    b) Stroop Effect
    c) Psychological Refractory Period
    d) Reaction time

2. _____is the general level of stimulation or readiness to act.
    Arousal
3. An _____is a rapid sequence of changes in the voltage across a membrane
    action potential
4. In a Flanker Task experiment, participants are asked to respond to a central target stimulus while ignoring surrounding distracting stimuli. What is the expected impact on participants' response time if the distracting stimuli are incongruent (e.g., arrows pointing in the opposite direction)?
    A) Response time is expected to decrease due to enhanced focus on the central target.
    B) Response time is expected to remain unchanged as the distractors should have no effect.
    C) Response time is expected to increase, reflecting interference from incongruent distractors.
    D) Response time is expected to be faster as incongruent distractors facilitate cognitive processing.

5. In the study of brain activity, researchers often use EEG and fMRI to capture different aspects of neural processes. If the goal is to examine the temporal dynamics of brain activity with high temporal resolution, which method would be more suitable?
    A) EEG (Electroencephalography)
    B) fMRI (Functional Magnetic Resonance Imaging)
    C) Both EEG and fMRI provide equally high temporal resolution.
    D) Neither EEG or fMRI is effective for capturing temporal dynamics.

6. In a town, residents encounter a daily challenge where they spot a surprise sign prompting them to interpret its message quickly. In response to this, they must decide whether to follow the sign's suggestion or not. Once decided, they swiftly plan their action, executing the chosen response precisely. This town's daily routine mirrors the cognitive flow from:
    A) Perception, Stimulus, Response Selection (Decision), Response Programming, Response
    B) Stimulus, Response, Perception, Response Selection (Decision), Response Programming
    C) Response Selection (Decision), Stimulus, Perception, Response Programming, Response

D) Perception, Stimulus, Response Programming, Response Selection (Decision), Response

7. The tract of nerve fibers that connects the left and right hemispheres in the brain is called _____

corpus callosum

8. The part of brain responsible for speech comprehension and color perception is
    a) Frontal Lobe
    b) Temporal Lobe
    c) Parietal Lobe
    d) Occipital Lobe

9. The part of brain responsible for depth perception is
    a) Frontal Lobe
    b) Temporal Lobe
    c) Parietal Lobe
    d) Occipital Lobe

10. True or False; Electroencephalography (or EEG) measures blood oxygen levels in the brain

11. fMRI has good _____ (**spatial**) resolution and bad _____ (**temporal**) resolution

12. True or False; During fMRI, the head of the subject is placed in a very strong homogeneous magnetic field.

13. Which of the following involves selective attention at play
    a) Listening to music at a crowded party
    b) Listening to white noise music while lying down
    c) Simultaneously reading a book and listening to a podcast episode
    d) None of the above

14. During a signal detection task, if a student detects a signal despite a signal not being present but noise, this must be case of
    a) Correct Rejection
    b) Hit
    c) Miss
    d) False Positive

15. How does the Cocktail party effect relate to attention?
    A. It demonstrates the brain's ability to multitask effectively.

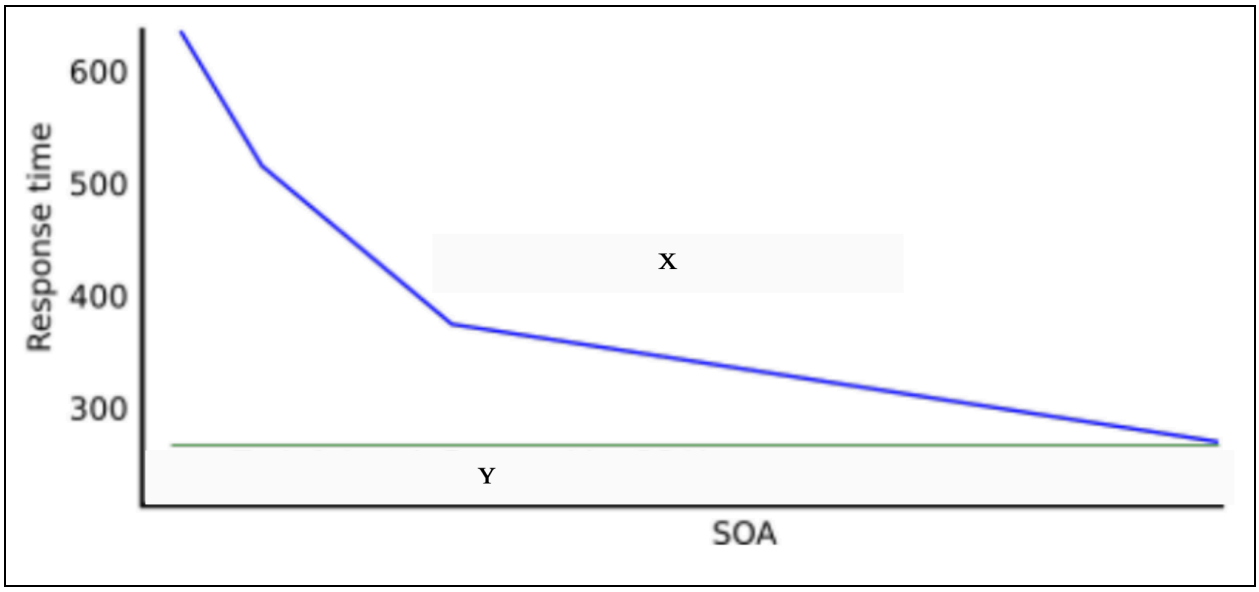
B. It highlights selective attention, where the brain focuses on relevant stimuli while filtering out Irrelevant ones.
C. It shows that attention is solely determined by external factors.
D. It proves that attention is a fixed capacity that cannot be modified.

16. Imagine you are at a crowded party, engaged in a conversation with a friend. Despite the noisy environment, you can effortlessly focus on your friend's voice while turning out the surrounding chatter.
In the above scenario, what term best describes the phenomenon of being able to focus on your friends voice while ignoring other conversations?
    A. Inattentional blindness.
    B. Selective attention.
    C. Divided attention.
    D. Sensory Adaptation.

17. Imagine you are searching for your friend in a crowded park. You know your friend is wearing a bright yellow jacket. Despite the large number of people, you quickly spot your friend from a distance because of the distinctive color of their jacket.
In the above scenario, what type of attentional mechanism is at play when you selectively focus on the color of your friend's jacket?
    a) Spatial attention
    b) Feature-based attention
    c) Object-based attention
    d) Divided attention

18. You are driving and talking on the phone when you see a red light turn yellow ahead. According to the psychological refractory period (PRP), what is most likely to happen to your reaction time in stopping the car?
    a) It will not be affected, as driving and talking are routine tasks.
    b) It will decrease, allowing you to stop more quickly.
    c) It will increase, making it harder to stop in time.
    d) It will become unpredictable and unreliable.

19. An experiment was conducted with 2 tasks shortly after each other (task 1 & task 2), the experimental data was then used to plot the graph given below. Identify the X and Y in the graph



A. X - Task 1 influenced by SOA, Y - Task 2 not influenced by SOA
B. X - Task 2 influenced by SOA, Y - Task 1 not influenced by SOA
C. X - Task 2 not influenced by SOA, Y - Task 1 influenced by SOA
D. X - Task 1 not influenced by SOA, Y - Task 2 influenced by SOA

20. You are at the bakery, trying to decide between two chocolate chip cookies. One cookie is slightly sweeter than the other. Based on the concept of just noticeable difference (JND) in psychophysics, which statement is most likely true?

    a) You will definitely notice the difference in sweetness between the two cookies.
    b) You will only be able to tell the difference if the sweeter cookie is at least twice sweet than the less sweet one.
    c) You will be able to notice the difference in sweetness, but the exact amount of sweetness difference needed depends on the original sweetness of the cookies.
    d) You cannot tell the difference in sweetness at all, as chocolate chip cookies are too complex.

21. A security guard is responsible for monitoring surveillance footage for suspicious activity. According to signal detection theory, what is most likely to happen if the guard is instructed to prioritize avoiding false positives (accusing innocent people)?

    a) They will miss some true positives (failing to identify actual threats).
    b) They will be equally likely to make false positives and false negatives.
    c) They will make more false positives than false negatives.
    d) They will make fewer false positives, even if it means missing some true positives.

22. True or false; If the distractors are more similar in characteristics to the target in a visual search task, it will lead to lesser reaction time.

23. Agent X is tasked with identifying enemy signals amidst a barrage of background noise. Applying Signal Detection Theory, what does it mean when Agent X has a high hit rate and a low false alarm rate?
    a. Agent X is an exceptional spy, accurately detecting enemy signals and rarely mistaking harmless noise.
    b. Agent X is overly cautious, often mistaking innocent background noise for enemy signals but rarely missing actual threats.
    c. Agent X is a risk-taker, frequently identifying enemy signals but also raising alarms for harmless background noise.
    d. Agent X is struggling with the task, frequently missing enemy signals and misinterpreting harmless background noise.

24. Which attention model emphasizes the early selection of information based on physical characteristics before semantic processing?
    a. Broadbent's Filter Model
    b. Filter Attenuation Theory
    c. Late Selection View
    d. Dual Processing Model