INDRAPRASTHA INSTITUTE *of* INFORMATION TECHNOLOGY
DELHI

PSY 305/50
Attention & Perception
Winter 2024
Mid-Term Examination

Name :

Roll Number :

Section –A: Single choice/answer questions (12 Marks)

Attempt any 12 questions **12 X 1 marks**

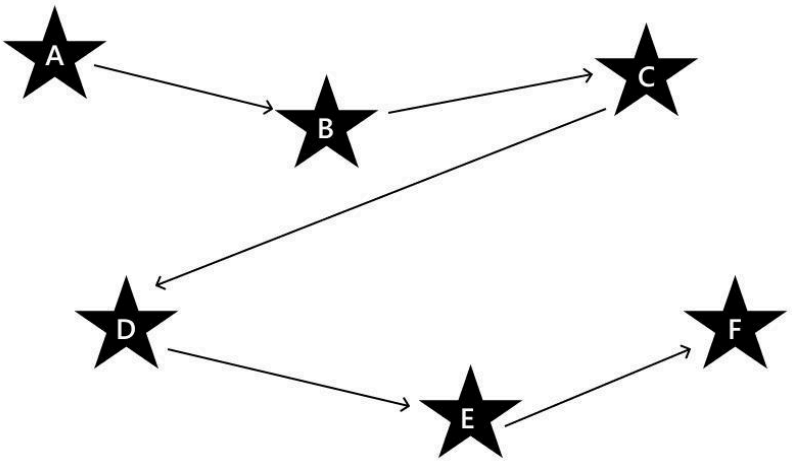
Choose the most appropriate option

1. Which of the following findings is most consistent with the early selection theory of attention?
    a. **When attention is focused on a location in low-load conditions, there is an increase in the amplitude of the P1 component of the ERP at occipital electrodes.**
    b. When attention is focused on a location in high-load conditions, there is a significant difference in the amplitude of the N1 component of the ERP between Cued and Uncued stimulus.
    c. There is no difference in the amplitude of the ERP components between cued and uncued locations in either low-load or high-load conditions.
    d. The amplitude of the ERP components is larger in high-load conditions than in low-load conditions, regardless of whether attention is focused on a location

2. During a magic show, the magician strategically uses verbal instructions to focus on a sudden burst of fireworks. Subsequently, the magician verbally instructs the audience to focus on a specific card in that corner.
    Choose **True**/False:
    The magician employed exogenous and endogenous cues during the magic show to manipulate the audience's attention, capturing it involuntarily and directing it intentionally.

3. Observing the visual scene below, where each star denotes a sequentially presented stimulus (based on assigned alphabets), I move from one stimulus to the next to extract salient information. The arrow

illustrates the gaze scan path between stimuli, with no available information on the latency and amplitude of the eye movements.



Select the most appropriate correct option:

a. All eye movements from one stimulus to another are smooth pursuit movements.
b. All eye movements from one stimulus to another are saccadic eye movements.
c. The eye movements certainly involved both saccade and smooth pursuit.
d. None of the above.

4. Imagine you are participating in a Posner cueing experiment. You are shown a fixation cross in the center of the screen. Sometimes, a cue (like a brighter flash of light) appears briefly on either the left or right side of the screen. After a short delay, a target (like a letter) appears on one side of the screen. Your task is to respond to the target as quickly and accurately as possible.
In a Posner cueing experiment using the spatial cueing paradigm, which of the following statements is most likely TRUE?
    a. When the cue appears on the same side as the target, reaction times are always slower than when they appear on different sides.
    b. The cue does not affect reaction times, as participants only focus on the target.
    c. When the cue appears on the same side as the target, reaction times are faster due to covert attention being directed to that location.
    d. Cues presented centrally (not on either side) will always lead to the fastest reaction times.

5. A study looked at how alcohol affects recognition memory through a signal detection task. Participants were asked to determine whether or not the items presented had been presented before. When the participants' response patterns were examined, it was discovered that the number of False Positives was significantly lower than that of Misses.
This is a case of **conservative** bias.

6. Ram was looking at the weather forecast when his phone rang. He tried to listen to the forecast while also answering the phone. What attention phenomenon did Ram use here?
    a) **Divided Attention**

b) Attention as a spotlight
c) Capacity Limited Attention
d) Involuntary Attention

7. **Receptor Field** is the region within a neuron where the presence of a stimulus alters the neuron's firing rate.

8. Which of the following statements is/are correct:
   a) Selective attention can operate at both early and late stages of information processing.
   b) High perceptual load implies Late Selection.
   c) Neurons exhibit variable responses to varied stimuli.
   d) Both A and C are correct

9. Imagine you are reading a book. As you go through each sentence, your eyes make rapid and simultaneous movements, quickly shifting to the next word in the sentence. This type of eye movement is referred to as?
   a) Saccades
   b) Smooth pursuit
   c) Pupil dilations
   d) Vergence movements

10. What can manipulate the size of the visual attentional focus, as characterized by an essentially even distribution of processing resources?
   a. Time
   b. Cueing
   c. Eccentricity
   d. Overt attention

11. According to the Zoom Lens hypothesis, what happens to the density of processing resources as the size of the attentional field increases?
   a. It decreases
   b. It remains constant
   c. It increases
   d. It fluctuates randomly

12. What does Covert attention involve?
   a. Quick eye movements
   b. Smooth eye movements
   c. Mental focus without physical eye movement
   d. Simultaneous eye movement in the same direction

13. Sarah is attending a crowded party. Despite the noise, she hears her name being called from across the room. What cognitive phenomenon is demonstrated here?
    a) Object-Based Attention
    b) Feature-based attention
    c) Cocktail Party Effect
    d) EEG

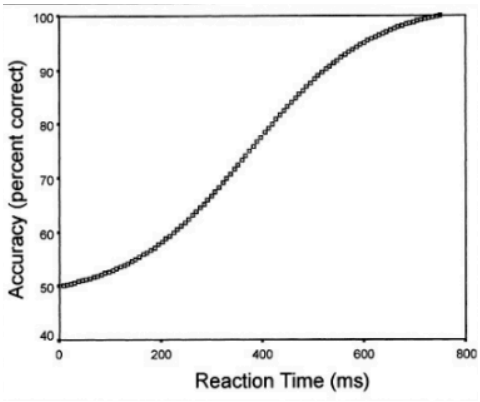
14.

	Signal Present	Signal Absent
Observer Responded	a	b
Observer Did Not Responded	c	d

In a signal detection task, participants were instructed to identify a visual signal (blue circle) and press the buzzer as soon as it appeared on screen. In the given matrix (refer to the above figure), the correct order sequence in place of a,b,c,d

a) a= Hit, b= False Positive, c= Miss, d= Correct Rejection
b) a= Miss, b= False positive, c= Hit, d= Correct Rejection
c) a=Hit, b= Correct Rejection, c=Miss, d= False positive
d) a=Hit, b= Miss, c=False Positive, d= Correct Rejection

15. Looking at the graph below, determine which of the following statements is incorrect.



a) The graph represents Speed - Accuracy tradeoff.
b) Increased response time is associated with decreased performance accuracy
c) The S-shaped form of the function reflects that when RTs are relatively fast, any decreases in RT are accompanied by large costs in accuracy.
d) Response decisions are made slowly with high accuracy or fast with high error rate.