

ANSWER KEY & MARKING SCHEME · CBSE CLASS 11**Sensory, Attentional and Perceptual Processes**

Psychology CI-11 · Chapter 5 · Use this with the Board Paper · Companion to Quick Drill

HOW TO USE

Attempt the Board Paper first (closed-book, full time). Then come here. For 2-mark+ questions, compare your answer to the model. For 3-4 mark questions, also consult the **Topper Templates** below — these show the exact step-by-step structure that scores full marks per CBSE marking-scheme conventions.

MODEL ANSWERS · BOARD PAPER**Section A — Very Short Answer (1 mark each)****Q1. Define absolute threshold. [1 mark]**

| **Ans:** The minimum amount of physical energy needed to produce a sensation on 50% of trials.

Q2. State Weber's law in symbolic form. [1 mark]

| **Ans:** $\Delta I / I = k$, where k is constant for a given sense.

Q3. Name the two types of photoreceptors in the retina. [1 mark]

| **Ans:** Rods (dim light, peripheral) and Cones (colour, central acuity).

Q4. What is a Just Noticeable Difference (JND)? [1 mark]

| **Ans:** The smallest change in stimulus intensity that can be reliably detected.

Q5. Give one example of sensory adaptation. [1 mark]

| **Ans:** Not feeling a wristwatch within a few minutes of wearing it.

Section B — Short Answer (3 marks each)**Q6. Explain any three Gestalt laws of perceptual organisation with one example each. [3 marks]**

| **Ans:** Proximity: dots close together form a group (3-dot cluster). Similarity: same-colour items grouped (rows of circles among squares). Closure: incomplete circle perceived as whole. Each law illustrates that the perceived whole is more than the sum of parts.

Q7. Distinguish between selective and sustained attention with one example of each. [3 marks]

| **Ans:** Selective attention focuses on one stimulus while ignoring others — e.g., listening to teacher and ignoring classroom noise. Sustained attention maintains focus over long durations — e.g., an air-traffic controller monitoring screens for hours. Selective is about choice; sustained is about endurance.

Q8. What are perceptual constancies? Mention any two with examples. [3 marks]

| **Ans:** Perceptual constancies are tendencies to perceive objects as unchanging despite changes in retinal image. Size constancy: a friend walking away does not appear to shrink. Shape constancy: a door looks rectangular even when its retinal image becomes a trapezoid as it opens. They show that perception is interpretation, not raw sensation.

Section C — Long Answer (5 marks each)**Q9. Compare Broadbent's filter model with Treisman's attenuation model of selective attention. Which one better explains the cocktail-party phenomenon and why? [5 marks]**

| **Ans:** Selective attention is the cognitive selection of one channel for deeper processing. Broadbent (1958) proposed an early all-or-none filter selecting on physical features (pitch, ear of arrival); unselected channels are blocked completely. Treisman (1964) revised this — the filter ATTENUATES rather than blocks; meaningful stimuli (own name, danger words) still cross the weakened filter. The cocktail-party effect (hearing one's own name in a noisy room) is better explained by Treisman because Broadbent's complete blocking would prevent the name from being processed at all. Treisman therefore accounts for dichotic-listening data, while Broadbent remains the historical foundation.

Q10. Explain how monocular and binocular cues contribute to depth perception. Mention any three monocular and two binocular cues with examples. [5 marks]

Ans: Depth perception is the ability to judge distance in a 3-D world from a 2-D retinal image. Monocular cues (one eye): (1) Linear perspective — railway tracks converge at the horizon; (2) Interposition — a tree partially hiding a building tells us the building is farther; (3) Texture gradient — pebbles appear denser in the distance. Binocular cues (two eyes): (1) Retinal disparity — each eye receives a slightly different image; the brain fuses them into stereoscopic depth; (2) Convergence — both eyes turn inward for near objects, and the muscle effort signals nearness. Monocular cues dominate in pictorial depth (paintings, photographs); binocular cues dominate for nearby real-world space.

Section D — Application / Case-based (6 marks)

Q11. Aarav looks at the famous Müller-Lyer illusion and is convinced that one line is longer, even after he measures both and finds them equal. (a) Explain why he perceives unequal lengths in terms of size constancy and depth cues. (b) Mention one cross-cultural finding that supports this explanation. (c) State one practical lesson the illusion teaches us about perception. [6 marks]

Ans: (a) The outward-pointing arrows resemble the FAR corner of a room (an outside corner), while inward-pointing arrows resemble a NEAR corner. The brain applies size constancy: if two retinal images are equal but one source is judged farther, the farther one must be physically larger, so it is perceived as longer. (b) The carpentered-world hypothesis predicts that people raised in environments rich in right-angles and rectangular buildings will show a stronger Müller-Lyer illusion than people from round-hut, non-carpentered cultures. Empirical cross-cultural research confirms this. (c) Perception is not a passive copy of the world; it is an active interpretation that applies learned rules (constancies, depth cues, cultural exposure). Illusions reveal these otherwise invisible rules at work.

★ TOPPER ANSWER TEMPLATES

2 TEMPLATES · MEMORISE THE FORMAT

★ TOPPER TEMPLATE — Differentiate between Broadbent's filter model and Treisman's attenuation model of selective attention. (5 marks)

Common

COMMON LOSS OF MARKS:

- Skipping definitions or terminology mid-answer
- No clear paragraph/point structure
- Conclusion absent or one-line

★ TOPPER TEMPLATE — Explain any FIVE monocular cues of depth perception with examples. (5 marks)

Common

COMMON LOSS OF MARKS:

- Skipping definitions or terminology mid-answer
- No clear paragraph/point structure
- Conclusion absent or one-line

MARKING SCHEME — GENERAL NOTES

- Definitions: 1 mark for correct definition + 1 mark for example where asked.
- Diagrams in eye/ear questions: 1 mark for labelled diagram.
- Long-answer Broadbent vs Treisman: 1 mark definition + 1.5 each model + 1 contrast + 0.5 evaluation.
- Depth-perception question: 0.5 per cue + 0.5 per example, capped at 5.
- Application question (Müller-Lyer): 3 marks (a) + 2 marks (b) + 1 mark (c).
- Penalise generic answers without specific examples by 0.5 per omission.