Six senses

VOCABULARY PRACTICE

ADVANCED | C1

Name: _____ **Date:** _____

1 Match each advanced perception concept with its meaning.

1 interoception	____	a conversion of physical energy into neural signals
2 exteroception	____	b perception shaped by interactions between body and environment
3 nociception	____	c detection and filtering of relevant stimulation
4 sensory transduction	____	d sensing internal bodily states
5 perceptual constancy	____	e processing potentially harmful stimuli
6 cross-modal perception	____	f maintaining stable object properties despite changing input
7 signal detection	____	g perception involving interaction between different senses
8 predictive processing	____	h sensing events and properties outside the body
9 sensory gating	____	i distinguishing meaningful input from background noise
10 embodied cognition	____	j brain's use of expectations to interpret incoming information

2 Complete the perception collocations.

constancy | cue | gating | input | processing | signal | threshold | transduction

1 sensory _____

2 predictive _____

3 cross-modal _____

4 perceptual _____

5 filter irrelevant _____

6 detect a faint _____

7 lower the detection _____

8 sensory _____ mechanism

3 Choose the concept that best captures the distinction.

1 Awareness of heartbeat and hunger: *interoception / exteroception*.

2 Neural coding of light at the retina: *sensory transduction / perceptual constancy*.

3 A door looks rectangular from different angles: *perceptual constancy / nociception*.

4 Lip movements alter the sound we hear: *cross-modal perception / sensory gating*.

5 Expectation shapes ambiguous input: *predictive processing / signal detection*.

6 The brain suppresses repetitive background stimuli: *sensory gating / embodied cognition*.

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4 Complete the integrative perception review with terms from the box.

embodied cognition | exteroception | interoception | nociception | perceptual constancy | predictive processing | sensory gating | sensory transduction | signal detection | cross-modal perception

Receptors begin **1** _____ by converting energy into neural activity. Signals about the external world support **2** _____, whereas information about internal states supports **3** _____. Potential tissue damage is registered through **4** _____. The brain selects relevant input through **5** _____ and separates weak signals from noise through **6** _____. Stable object recognition relies on **7** _____. Expectations contribute to **8** _____, interaction among senses produces **9** _____, and bodily action itself shapes thought in **10** _____.

5 Read the text and answer the questions concisely.

Perception as inference

Sensory signals are often incomplete or noisy, so perception cannot be a simple recording of the world. The brain combines incoming evidence with prior expectations and estimates the most likely cause of the signal. This process is efficient, but it can also produce illusions when expectations outweigh ambiguous evidence. Attention changes which signals receive greater weight, while action supplies new evidence: turning the head, moving closer or touching an object can reduce uncertainty. Perception is therefore an active cycle of prediction, sampling and revision.

1 Why is perception not a simple recording? _____

2 What two sources does the brain combine? _____

3 When can illusions arise? _____

4 What does attention change? _____

5 How can action reduce uncertainty? _____

6 What three-part cycle is described? _____

6 Paraphrase using the expression in capitals.

1 The brain filtered out repeated background input. **GATING** __

2 Her body position influenced how she solved the task. **EMBODIED** _

3 The object appeared stable despite changing viewpoints. **CONSTANCY** _

4 He noticed subtle changes in his heartbeat. **INTEROCEPTION** ___

OVER TO YOU

Write a **160-190 word** explanation of why perception is constructive rather than passive. Address signals, expectations, attention, action and possible errors.

[ ] Use at least ten target terms or collocations. [ ] Distinguish sensation from inference. [ ] Qualify claims precisely.

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ANSWER KEY

1 Advanced perception concepts

1 **d** 2 **h** 3 **e** 4 **a** 5 **f** 6 **g** 7 **i** 8 **j** 9 **c** 10 **b**

2 Perception collocations

1 **transduction** 2 **processing** 3 **cue** 4 **constancy** 5 **input** 6 **signal** 7 **threshold** 8 **gating**

3 Conceptual distinctions

1 **interoception** 2 **sensory transduction** 3 **perceptual constancy**
4 **cross-modal perception** 5 **predictive processing** 6 **sensory gating**

4 Integrative perception review

1 **sensory transduction** 2 **exteroception** 3 **interoception** 4 **nociception** 5 **sensory gating**
6 **signal detection** 7 **perceptual constancy** 8 **predictive processing** 9 **cross-modal perception** 10 **embodied cognition**

5 Reading - suggested answers

1 Signals are incomplete or noisy. 2 Evidence and prior expectations. 3 When expectations outweigh ambiguous evidence.
4 The weight given to signals. 5 By moving or touching. 6 Prediction, sampling and revision.

6 Paraphrasing - possible answers

1 Sensory **gating** filtered the input. 2 This illustrates **embodied cognition**. 3 This was perceptual **constancy**. 4 He used **interoception**.

Over to you: Answers will vary. Check theoretical precision, mechanisms, evidence and cautious evaluation.