**UNIT IV**

**SENSATION AND PERCEPTION**

**SENSATION**- information we get from our **five senses** (hearing, taste, touch, smell, and vision), the **vestibular** (whole body balance or *equilibrium*) sense and the **kinesthetic** (body part position and movement) sense. (SEVEN SENSES TOTAL)

Bottom-up Processing:

Psychophysics:

Absolute Threshold:

Difference Threshold (Just Noticeable Difference- **JND**):

Weber’s Law:

Attention In order to pick up on certain stimuli, one generally needs to attend (pay attention) to it.

Selective Attention:

Divided Attention:

**Signal Detection Theory:**

*Stimulus present Stimulus absent*

FALSE

ALARM

HIT

*Responds Yes*

CORRECT

REJECTION

MISS

*Responds No*

**VISION**

***DIRECTIONS: Draw a diagram of the eye. Label the following structures.***

Cornea Lens Rods Optic nerve

Pupil Retina Blind Spot

Iris Cones Fovea

***DIRECTIONS: Write BRIEF (2-4 words) definitions for all of the above visual structure.***

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**VISION THEORIES**

***DIRECTIONS: Briefly describe the following theories/terms.***

1. Trichromatic Color Vision Theory (a.k.a. Young-Helmholtz Theory):

2. Opponent Process Color Vision Theory:

3. Explain an *afterimag*e. According to Opponent Process Color theory, why do we see an afterimage?

**HEARING**

***DIRECTIONS: Answer the following questions.***

1. Explain the path a sound wave would travel as it enters the ear. Use a path on the diagram below.

> Draw a diagram of the ear using the terms below:

auditory canal hammer (malleus) cochlea

eardrum anvil (incus) semicircular canals

stirrup (stapes) auditory nerve

2. What is conduction deafness?

3. What is nerve hearing loss?

4. Explain the *place theory* of hearing.

5. Explain the *frequency theory* of hearing.

**PERCEPTION: Unit 4/Part two**

**PERCEPTION**- how we interpret the information we get from our senses. Two people can perceive the same situation very differently.

Top down processing:

Frame of reference/Framing:

Perceptual Set (Perceptual Expectancy):

Schema:

Context:

GESTALT PSYCHOLOGY- the tendency for humans to want to organize their perceptions into meaningful units or *wholes. Gestalt principles of perception:*

Closure:

Proximity:

Shape Constancy:

**MONOCULAR DEPTH CUES**

Monocular depth cues require only one eye. (Mono=one)

Accommodation:

Brightness:

Interposition:

Linear Perspective:

Motion Parallax:

Texture Gradient

**BINOCULAR DEPTH CUES**

Binocular depth cues require both eyes. (Bi=two)

Convergence:

Retinal Disparity (binocular disparity):

THEORIES OF PERCEPTION

How do we recognize things in the world? You need to know these two theories for the exam.

FEATURE ANALYSIS THEORY: (David Hubel and Thorsten Weisel)

PROTOTYPE MATCHING THEORY: