

NCERT SOLUTIONS

CLASS - 11th



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Class : 11th
Subject : Psychology
Chapter : 5

Chapter Name : Sensory; Attentional and perceptual processes

Q1 Explain the functional limitations of sense organs.

Answer. Sense organs which provide us with all the information about our environment also have function certain limitations. In order to be noticed by our eyes, the stimuli has to be in the range of our eyes, till where the vision can reach. The same is the case with ears, in order to get a sound to reach our ears, the sounds have to be of a minimum decibel.

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Q2 What is meant by light and dark adaptation? How do they take place?

Answer. Our pupils adjust to the increasing and decreasing intensity of light from everyday. Adjusting to a bright light, when the eye has been exposed to dim light is a short process and may take a minute to go through. Dark adaptation is when the eye is exposed to the dark/dim light and it takes half an hour or so to adjust when exposed to bright light again. All of this depends on the previous intensity of exposure.

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Q3 What is colour vision and what are the dimensions of colour?

Answer. Colour vision enables a person to distinguish between different colours which one finds in their environment. At present, any normal person is known to be able to distinguish between seven million colours.

The basics of it are:

Colour hue: it is supposed to be a chromatic colour property, and refers to the name of colours. As each colour is defined with a specific wavelength, hue is identified with the same. There are achromatic colours as well which do not have this property.

Saturation: it is the relative amount of hue of any object. Maximum saturation is when the wavelengths are the least.

Brightness: is more when the intensity of light is more and less when the intensity decreases. It is different for different colours.

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Q4 How does auditory sensation take place?

Answer. Auditory sensation begins when an auditory stimuli enters the ear.

The vibrations of the sound that reaches the ears is collected by Pinna. After this, these vibrations are sent to the three ossicles, through which, they're transferred to the inner ear. The sound waves are received by cochlea, thereafter. The endolymph is then set in motion. The impulse is finally interpreted when they reach the auditory nerve, which is at the base of the cochlea and reaches the auditory cortex.

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Q5 Define attention. Explain its properties.

Answer. Whenever there is a number of stimuli present in front of us, selecting very specific stimuli from the group is generally referred to as attention.

Its properties are:

1. Selection: from a large group of stimuli, only a few of them are noticed by our sense organs. This is known as selection of stimuli.
2. Alertness: it may happen that a certain stimulus appears in front of an individual, out of nowhere, hence, their alertness allows them to readily deal with it.
3. Concentration: while we encounter many stimuli at once, we don't notice all of them, we have to focus on one or more stimuli and ignore the rest, this is known as concentration
4. Search: among a set of objects, a person searches for a particular subset of it.

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Q6 State the determinants of selective attention. How does selective attention differ from sustained attention?

Answer. From a huge group of stimuli that one may encounter, only a few of them get noticed by our sensory organs. Selective attention allows us to focus our awareness on a specific stimulus after all have been encountered. The size of the stimuli and other physical attributes pertaining to the stimuli are important determinants of selective attention.

Other factors responsible cognitive. The stimuli which interest us are more attended to more than those we have no interest in. Our needs and sense of gratification drives us to attend to certain stimuli more than others.

Sustained attention, on the other hand is about focusing the awareness on certain objects while excluding others.

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Q7 What is the main proposition of Gestalt psychologists with respect to perception of the visual field?

Answer. According to Gestalt psychologists, stimuli comes in whole forms for human beings. That's how they perceive stimuli in different ranges. It seems to be working on the figure ground relationship. This is how they think humans perceive the environment, where they the world, for them, is divided into two parts, namely, figure and ground. The former had a definite shape and the latter doesn't, it continues behind the figure. This helps identify the difference between sensation and perception. Whenever a difference is observed between brightness and colours of the ground, it is seen to be forming contours. They give the three dimensional look to objects and differ them from their grounds. Haws of grouping are the various ways in which one groups items together in their perception. These basic principles include similarity, proximity, closure, and continuity.

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Q8 How does perception of space take place?

Answer. We always perceive things in three dimensional terms, even if our vision is only two dimensional. Space is also perceived in three dimensional terms, this is because the attributes associated with space make an individual's perception three dimensional.

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Q9 What are the monocular cues of depth perception? Explain the role of binocular cues in the perception of depth.

Answer. Monocular cues are used mainly by artists, as psychological cues in order to make a two dimensional painting seem like a three dimensional one. They make us look at the paintings as if the paintings have depth.

Relative Size: we perceive the objects to be at a distance from us, when they're smaller in size.

Interposition or Overlapping: we perceive depth and distance when we see certain objects overlapping each other. The objects being overlapped are considered to be at a distance and the objects that are overlapping are considered to be nearer to us.

Linear Perspective: we perceive the objects that are at a distance, together, to be closer to each other, than the objects which are nearer to the eye.

Aerial Perspective: distant objects are always blurry or hazy, this happens due to the presence of dust and moisture particles in the air which compromise a clear view.

Binocular cues are an individual's perception of something from both eyes.
These are:

Retinal or Binocular Disparity: the retinal image formed in each of our eyes is different due to the distance between our eyes.

Convergence: when our eyes have to see and form the retinal image of an object that is near to our eyes, eyes tend to converge inward. This makes our ciliary muscles which are responsible for the whole process, tensed to change the thickness of the lenses. However, when the object moves further away, these muscles relax.

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Q10 Why do illusions occur?

Answer. Individuals perceive different stimuli differently, illusions occur when there is a confusion between a stimulus which is physically present and its perspective by the individual. They are originated from an external physical stimulus. Some illusions are universal and are called permanent illusions. For example: oasis.

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Q11 How do socio-cultural factors influence our perceptions?

Answer. Psychologists have, from time to time, attempted to study how socio cultural factors affect one's perception. They performed experiments which different communities of people who were brought up in different cultures and then compared the results. This was especially seen when there were contrasting differences between the perceptions of people of Europe and Africa. Both of them are suspected of being in illusions by the kind of environment they live in.

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