OPTO 411  -  Orthoptics

MCQ Examples

The Bagolini glass test is used to detect all of the following EXCEPT:

A. Eccentric Fixation            B.  Anomalous retinal correspondence

C.  Amblyopia                       D.  Suppression

Suppression may develop to overcome or avoid all of the following symptoms Except:

A.  Amblyopia   B.  Binocular diplopia   C.  Confusion   D.  Incompatible images

A pseudostrabismus may result from all of the following except:

A.  Heterochromia Irides      B.   Palpebral fissure asymmetry    C.  Iritis    D.  Epicanthus

The active cortical inhibition of unwanted stimuli, is called:

A.  Amblyopia   B.  Hypophoria   C.  Strabismus   D.  Suppression

Conjugate movement of both eyes, originating in the frontal lobe, and generating speeds of up to

4000/sec are called:

A.  Saccadic movements                   B.  Vergence movements

C.  Smooth pursuit movements        D.  None of the preceding options

Short Essay Examples

Differentiate between binocular vision and binocular single vision

In binocular vision, there is simultaneous perception of two images - one from each eye. There is no fusion of these images into a single image. In its more manifest form, the patient easily reports diplopia when 'seeing' with both eyes.

In binocular single vision, there is simultaneous use of both eyes to give a single mental image of the object of regard. We can say that binocular single vision is an advanced form of binocular vision. Normal binocular single vision is bifoveal and there is no manifest deviation.

Differentiate between Normal and Abnormal retinal correspondence

When a person with normal binocular vision looks at an object, the image of that object falls on

both foveae. In this case both foveas receive information from the same object and the brain

fuses both uniocular images into one. The foveas are said to be related (conjugate or corresponding). Based on the fovea-fovea correspondence, the completion of normal retina to retina conjugation takes place so that (for example) a point 3mm nasal from the left fovea corresponds exactly with another point which is approximately 3mm temporal from the right fovea. Eventually all point on the left retina have exact corresponding points on the right retina. This is Normal Retinal Correspondence (NRC).

In abnormal retinal correspondence what happens is that the initial NRC relationship between both retinas is lost (for example due to a blunt trauma that comprises the function of the lateral rectus of one eye leading to esotropia). In esotropia, one eye is turned so that both foveas no longer perceive the same objects. The ‘errant’ is quickly suppressed in most cases and the brain locates the point on the ‘errant’ eye which perceives the same object as the good eye. Depending on whether this extrafoveal point lies within a well-defined locus of points (Panum’s fusional area) surrounding the ‘errant’ fovea (a relationship may be formed between the good fovea and any of the points within this locus – the opposite would true if the ‘good’ fovea was the ‘errant’ fovea). If the extrafoveal point lies within Panum’s area, then the old fovea-to-fovea relationship is cancelled and a new relationship is made between the ‘good’ fovea and the extrafoveal point on the ‘errant’ eye. This relationship redefinition takes place for all the other retinal points so that eventually the left retina is now related to the right retina in a different, less precise manner than previously. This new retina-retina relationship is what is referred to as Abnormal Retinal Correspondence (ARC).