

QUESTIONS

1.16 Eye and Ear

589. The sclera of the eye is:
- (a) opaque and white
 - (b) composed of flat collagenous bundles
 - (c) richly vascularized
 - (d) composed of stratified epithelium
 - (e) continuous with the cornea
590. The sclerocorneal junction or limbus:
- (a) is the site for the outflow of aqueous humor
 - (b) contains the canal of Schlemm
 - (c) contains the trabecular network
 - (d) is the site of the termination of Bowman's membrane
 - (e) shows a sharp transition between the corneal epithelium and bulbar conjunctiva
591. The cornea is:
- (a) highly transparent
 - (b) richly vascularized
 - (c) nourished primarily by aqueous humor
 - (d) nourished primarily by tears
 - (e) oxygenated directly from the atmosphere
592. The (anterior) epithelium of the cornea:
- (a) is a simple squamous epithelium
 - (b) is a stratified squamous epithelium
 - (c) contains an abundance of free nerve endings
 - (d) has very limited powers of regeneration
 - (e) frequently exhibits mitoses
593. Bowman's membrane is:
- (a) restricted to the cornea
 - (b) a true trilaminar membrane
 - (c) visible by light (optical) microscopy
 - (d) composed of collagen fibrils
 - (e) the outer layer of the substantia propria
594. The stroma or substantia propria of the cornea is:
- (a) muscular
 - (b) opaque
 - (c) composed of orderly arranged bundles of collagen fibrils
 - (d) acellular
 - (e) an important element in the refraction of light entering the eye

595. Descemet's membrane is:
- (a) found in the organ of Corti
 - (b) present in the cornea
 - (c) visible by light microscopy
 - (d) composed of an atypical form of collagen
 - (e) lined by squamous 'endothelial' cells
596. The lens of the eye in young healthy people is:
- (a) transparent
 - (b) very elastic
 - (c) composed of epithelial
 - (d) composed mainly of collagenous fibrils
 - (e) coated with a carbohydrate-rich capsule
597. The lens fibers are:
- (a) connective tissue cells
 - (b) modified epithelial cells
 - (c) elongated hexagonal prisms
 - (d) mostly lacking nuclei
 - (e) rich in organelles
598. The middle or vascular coat of the eye contains:
- (a) choroids
 - (b) ciliary body
 - (c) ciliary processes
 - (d) iris
 - (e) melanocytes
599. The ciliary body:
- (a) is composed of striated muscle
 - (b) secretes aqueous humor
 - (c) absorbs aqueous humor
 - (d) is in the form of a continuous ring
 - (e) contains loose connective tissue including elastic fibers
600. The ciliary epithelium lining the inner surface of the ciliary body:
- (a) produces aqueous humor
 - (b) produces vitreous humor
 - (c) consists of two layer only
 - (d) contains pigment
 - (e) has considerable ion-transporting properties.

601. The iris:
- (a) separates the anterior chamber from the properties.
 - (b) is connected to the ciliary body
 - (c) diminishes in thickness towards its margins
 - (d) contains a loose, pigmented, highly vascular, connective tissue
 - (e) has two sets of antagonistic smooth muscles.
602. The retina in humans is:
- (a) photosensitive throughout
 - (b) derived from the optic vesicle
 - (c) richly vascularized
 - (d) easily detached from the underlying choroids
 - (e) inverted so that light must pass through the layers of neurons before reaching the photoreceptors.
603. The nuclei of the retinal photoreceptor are found in the:
- (a) inner nuclear layer
 - (b) outer plexiform layer
 - (c) ganglion cell layer
 - (d) outer nuclear layer
 - (e) inner plexiform layer
604. The rod cells of the retina possess:
- (a) a long, cylindrical outer segment
 - (b) an inner segment composed of membranous disks
 - (c) structures resembling cilia
 - (d) ellipsoids
 - (e) sensitivity to colors.
605. The pigment 'epithelium' associated with the retina:
- (a) is composed of cells with a regular hexagonal shape
 - (b) has many basal plasmalemmal invaginations typical of cells involved in active transport
 - (c) has long apical processes which penetrate between the outer segments of the photoreceptors
 - (d) contains large numbers of melanin granules
 - (e) is a true epithelium in that it lines a cavity.
606. The pigment 'epithelium' associated with the retina:
- (a) is composed of a single layer of cells
 - (b) is composed of stratified epithelium
 - (c) adheres strongly to Bruch's membrane of the inner choroids
 - (d) contains stores of vitamin A
 - (e) is phagocytic and degrade disks of the outer segment of rods.

607. The pigment 'epithelium associated with the retina:
- (a) has tight junctions that help protect the retina from undesirable metabolites from the choroids
 - (b) absorbs light that has passed through the layers of photoreceptors
 - (c) engulfs and digests spent disks of the cone cells
 - (d) prevent internal reflections of light within the eye
 - (e) is essential for the regeneration of the visual pigment, rhodopsin.
608. The macula lutea in the retina is:
- (a) the blind spot of the eye
 - (b) pigmented yellow
 - (c) richly vascularized
 - (d) abundant with rod photoreceptors
 - (e) highly sensitive to light.
609. The vitreous body of the eye is :
- (a) found in the posterior chamber
 - (b) found only between the lens and the retina
 - (c) transparent
 - (d) jelly-like
 - (e) composed of hyaluronic acid and collagen-like fibrils.
610. The optic nerve contains:
- (a) myelinated nerve fibers
 - (b) non-myelinated nerve fibers
 - (c) pigment cells
 - (d) Schwann cells
 - (e) fibers capable of regeneration after being severed.
611. The optic nerve is:
- (a) enclosed by all the meninges
 - (b) derived from the embryonic optic vesicle
 - (c) similar to tract of white brain matter
 - (d) the route of the main blood vessel supplying the retina
 - (e) the site of abundant astrocytes.

612. Conjunctiva:
- (a) is a mucous membrane
 - (b) covers the inner surface of eyelids
 - (c) lines the cornea
 - (d) may contain goblet cells
 - (e) is lined with stratified columnar or squamous epithelium.
613. Lacrimal glands:
- (a) are found in eyelids
 - (b) secrete tears
 - (c) lubricate the conjunctiva and cornea
 - (d) produce lysozyme
 - (e) have myoepithelial cells
614. The tarsus of the eyelids is:
- (a) present in both upper and lower eyelids
 - (b) formed of dense connective tissue
 - (c) the main skeletal structure of the eyelids
 - (d) the site of Meibomian glands
 - (e) plate-like in structure
615. Meibomian glands are:
- (a) found in ears
 - (b) found in eyelids
 - (c) serous glands
 - (d) sebaceous glands
 - (e) mucous glands
616. The pinna or auricle of the external ear possesses:
- (a) hyaline cartilage
 - (b) elastic cartilage
 - (c) abundant sweat glands
 - (d) perichondrium with many elastic fibers
 - (e) hair follicles
617. The tympanic cavity of the middle ear is:
- (a) lined mainly with simple squamous epithelium
 - (b) lined mainly with stratified squamous epithelium
 - (c) lined mainly with pseudostratified epithelium
 - (d) air-filled
 - (e) fluid-filled

618. The tympanic membrane (eardrum) possesses:
- (a) two distinct layers of collagen fibers
 - (b) fibroblasts
 - (c) stratified squamous epithelium
 - (d) simple squamous epithelium
 - (e) modified sebaceous glands
619. The cristae ampullares are:
- (a) found in specialized areas of semicircular canals
 - (b) in the form of transverse ridges
 - (c) coated with sensory epithelium
 - (d) covered with a jelly-like cupula
 - (e) coated with otoliths
620. The receptor cells in the ampullae of the semi-circular canals are:
- (a) neurons
 - (b) neuroglia
 - (c) sensitive to mechanical stimuli
 - (d) epithelial cells on which terminate sensory nerve fibers
 - (e) coated with apical stereocilia
621. The otoliths or otoconia are:
- (a) crystals
 - (b) found in the cochlea
 - (c) composed of calcium carbonate
 - (d) suspended in a jelly-like proteoglycan
 - (e) large enough to be seen by light microscopy
622. Hair cells of the receptors of the vestibular apparatus of the inner ear respond to movements of the:
- (a) otoliths (otoconia)
 - (b) perilymph
 - (c) endolymph
 - (d) tectorial membrane
 - (e) cupula
623. The organ of Corti is:
- (a) responsible for body equilibrium
 - (b) found in the middle ear
 - (c) found in the cochlea
 - (d) in contact with the tectorial membrane
 - (e) sensitive to movements of otoliths (otoconia)

624. The hair cells of the organ of Corti:
- (a) function as receptors
 - (b) are of more than one type
 - (c) possess stereocilia
 - (d) have large number of mitochondria
 - (e) are in synaptic contact with fibers of the cochlear nerve
625. Endolymph of the inner ear is:
- (a) found in the scala vestibule
 - (b) found in the cochlear duct
 - (c) secreted in part by the stria vascularis
 - (d) secreted by the endolymphatic sac
 - (e) similar in composition to perilymph
626. The stria vascularis is:
- (a) found in the striate area of the cerebral cortex
 - (b) found in the semicircular canals
 - (c) found in the cochlea
 - (d) composed of stratified epithelium that contains blood vessels
 - (e) the main-source of endolymph production