



रेलवे भर्ती बोर्ड / RAILWAY RECRUITMENT BOARD
सी ई एन नं. - 04/2024 - CEN No. - 04/2024



Test Date	30/04/2025
Test Time	12:45 PM - 2:15 PM
Subject	OPTOMETRIST

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : General Ability

Q.1 Which of the following is required for the thermal decomposition of calcium carbonate (CaCO₃)?

- Ans ☒ 1. Electricity
☒ 2. Light
☒ 3. Heat
☒ 4. Water

Q.2 Which of the following is CORRECTLY matched regarding the asexual reproduction?

- Ans ☒ 1. Spore Formation - Bryophyllum
☒ 2. Vegetative Propagation - Sugarcane
☒ 3. Budding - Amoeba
☒ 4. Binary Fission - Hydra

Q.3 Which of the following organisations publishes the Human Development Report that includes the Human Development Index (HDI)?

- Ans ☒ 1. Organisation for Economic Co-operation and Development (OECD)
☒ 2. United Nations Development Programme (UNDP)
☒ 3. International Monetary Fund (IMF)
☒ 4. World Bank (WB)

Q.4 15 bags and 15 pens together cost ₹1650, whereas 18 bags and 14 pens together cost ₹1680. The cost of 9 bags exceeds the cost of 2 pens by:

- Ans ☒ 1. ₹165
☒ 2. ₹164
☒ 3. ₹163
☒ 4. ₹166





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Q.5 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:
All tips are nips.
No tip is a spike.

Conclusions:
(I): Some spikes are nips.
(II): All nips are spikes.

- Ans**
- ☐ 1. Both conclusions (I) and (II) follow
 - ☐ 2. Only conclusion (I) follows
 - ☒ 3. Neither conclusion (I) nor (II) follows
 - ☐ 4. Only conclusion (II) follows

Q.6 When did the 4th edition of the Pan-India Coastal Defence Exercise, Sea Vigil-24, conclude?

- Ans**
- ☐ 1. 5 December 2024
 - ☒ 2. 21 November 2024
 - ☐ 3. 15 November 2024
 - ☐ 4. 21 October 2024

Q.7 A concave mirror has a focal length of 20 cm. An object is placed at 30 cm in front of it. What is the image distance?

- Ans**
- ☐ 1. 30 cm
 - ☒ 2. -60 cm
 - ☐ 3. 60 cm
 - ☐ 4. -30 cm

Q.8 Which of the following is NOT a simple permanent tissue?

- Ans**
- ☐ 1. Sclerenchyma.
 - ☐ 2. Collenchyma
 - ☒ 3. Phloem
 - ☐ 4. Parenchyma

Q.9 Which of the following statements is INCORRECT regarding Harappan architecture?

- Ans**
- ☐ 1. Harappan cities had underground sewage system to take the waste water away.
 - ☐ 2. Most Harappan cities seem to have been protected by fortifications.
 - ☐ 3. Some large buildings, like warehouses for storage, were used for collective purposes.
 - ☒ 4. All the Harappan houses were constructed without any use of bricks.

Q.10 What is the maximum value that must be assigned to A so that the 8-digit number 733A4101 is divisible by 3?

- Ans**
- ☐ 1. 5
 - ☒ 2. 8
 - ☐ 3. 3
 - ☐ 4. 7



Q.11 In a conference meeting of professors from all over the country, eight members named Dr. L, Dr. M, Dr. N, Dr. O, Dr. P, Dr. Q, Dr. R and Dr. S were seated in a circular table facing centre. Dr. P was seated second to the left of Dr. S. Only two persons were seated between Dr. M and Dr. P. Dr. O and Dr. S were immediate neighbours. Dr. N was seated third to the left of Dr. S. Dr. Q was seated to the immediate right of Dr. S. Dr. M was seated second to the right of Dr. Q. Neither Dr. Q nor Dr. S was an immediate neighbour of Dr. L. What is the position of Dr. S with respect to Dr. R?

- Ans**
- ✔ 1. Second to the left
 - ✗ 2. Third to the left
 - ✗ 3. Fourth to the right
 - ✗ 4. Third to the right

Q.12 Select the pair that follows the same pattern as that followed by the two pairs given below. Both pairs follow the same pattern.

HSE : KOJ
BKW : EGB

- Ans**
- ✔ 1. UAN : XWS
 - ✗ 2. IOL : LLQ
 - ✗ 3. TCQ : XZV
 - ✗ 4. JWS : MSY

Q.13 Which of the following is CORRECT regarding voluntary muscle?

- Ans**
- ✗ 1. The cells of this tissue are cylindrical, unbranched and uninucleate
 - ✗ 2. The cells of this tissue are cylindrical, branched and multinucleate
 - ✔ 3. The cells of this tissue are cylindrical, unbranched and multinucleate
 - ✗ 4. The cells of this tissue are spindle, unbranched and multinucleate

Q.14 The magnification (m) of a spherical mirror is given by $m = -v/u$, where v and u are the image and object distances, respectively. Which of the following statements is correct?

- Ans**
- ✗ 1. A negative magnification means that the image is virtual and erect.
 - ✗ 2. The magnification is always positive for concave mirrors.
 - ✔ 3. If $|m| < 1$, the image is diminished.
 - ✗ 4. A positive magnification means that the image is real and inverted.

Q.15 Which of the following is NOT correct regarding the cytoplasm?

- Ans**
- ✗ 1. Cytoplasm is composed of water, salts, and various organic molecules
 - ✔ 2. Cytoplasm is the fluid content inside the nuclear membrane
 - ✗ 3. The cell's organelles are enclosed by membrane
 - ✗ 4. The cytoplasm contains all the cell's organelles

Q.16 Which Indian cricketer was appointed as the Captain of the Delhi Capitals for the 2025 Indian Premier League (IPL) season?

- Ans**
- ✗ 1. Rishabh Pant
 - ✗ 2. Shreyas Iyer
 - ✔ 3. Axar Patel
 - ✗ 4. Prithvi Shaw

Q.17 Which of the following Union Territories in India has a Legislative Assembly?

- Ans**
- ✗ 1. Chandigarh
 - ✗ 2. Lakshadweep Islands
 - ✗ 3. Andaman and Nicobar Islands
 - ✔ 4. Puducherry



Q.18 Komal and Bibha together can complete a work in 120 days. Bibha and Rita can complete the same work together in 160 days, and Rita and Komal can complete the same work together in 96 days. In how much time will all three of them complete that work together?

- Ans**
- ☐ 1. 90 days
 - ☐ 2. 60 days
 - ☒ 3. 80 days
 - ☐ 4. 70 days

Q.19 A man sold an article for ₹293 by first giving a d% discount on its marked price, and then another discount having the same nominal value (in ₹). If the marked price of the article is ₹1172, then what is the value of d?

- Ans**
- ☒ 1. 37.5
 - ☐ 2. 34.5
 - ☐ 3. 36.5
 - ☐ 4. 40.5

Q.20 Which sanctuary, located in the Indian state of Rajasthan, is known for ducks and herons?

- Ans**
- ☐ 1. Periyar Sanctuary
 - ☐ 2. Kelameru Bird Sanctuary
 - ☒ 3. Keoladeo National Park
 - ☐ 4. Manas Sanctuary

Q.21 An element has an atomic number of 11. Based on this information, which of the following is correct?

- Ans**
- ☒ 1. It readily loses one electron to form a positive ion.
 - ☐ 2. It belongs to Group 17 and forms diatomic molecules.
 - ☐ 3. It is a non-metal that gains electrons to form an anion.
 - ☐ 4. It is a noble gas with a full outer shell.

Q.22 Which category of workers is the primary focus of the Union Budget 2025's initiative to expand e-Shram registration?

- Ans**
- ☐ 1. Corporate professionals
 - ☐ 2. Government employees
 - ☐ 3. Retired pensioners
 - ☒ 4. Gig and platform workers

Q.23 A refrigerator rated at 800 W operates for 24 hours/day. What is the cost of the energy required to operate it for 30 days at a rate of ₹8.00 per kW h?

- Ans**
- ☐ 1. ₹800
 - ☒ 2. ₹4,608
 - ☐ 3. ₹3,200
 - ☐ 4. ₹5,202

Q.24 Based on the English alphabetical order, three of the following four letter clusters are alike in a certain way and thus form a group. Which pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

- Ans**
- ☐ 1. PNL
 - ☐ 2. VTR
 - ☐ 3. KIG
 - ☒ 4. OML



Q.25 Which Article of the Indian Constitution directs the state 'to secure and protect a social order in which justice—social, economic, and political—shall inform all the institutions of national life'?

- Ans**
- ☐ 1. Article 37
 - ☒ 2. Article 38
 - ☐ 3. Article 41
 - ☐ 4. Article 39

Q.26 During the electrolytic refining of copper, what happens to impurities like gold and silver present in the impure copper anode?

- Ans**
- ☐ 1. They form a separate layer on the electrolyte surface.
 - ☐ 2. They get deposited as pure metal on the cathode.
 - ☒ 3. They settle down as anode mud at the bottom of the cell.
 - ☐ 4. They dissolve in the electrolyte and later react with copper ions.

Q.27 What will come in the place of the question mark '(?)' in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

$56 + 8 \div 36 \times 6 - 13 = ?$

- Ans**
- ☐ 1. 48
 - ☐ 2. 25
 - ☐ 3. 16
 - ☒ 4. 21

Q.28 The volume of a solid cylinder is 54054 cm^3 and its height is 39 cm. What is the total surface area of the solid cylinder? (Nearest to an integer).

- Ans**
- ☐ 1. 7915 cm^2
 - ☒ 2. 7920 cm^2
 - ☐ 3. 7917 cm^2
 - ☐ 4. 7933 cm^2

Q.29 The Northern Plains of India are primarily formed by the deposition of sediments brought by three river systems. Which of the following river systems is NOT a major contributor to the formation of the Northern Plains?

- Ans**
- ☐ 1. Ganga
 - ☐ 2. Brahmaputra
 - ☒ 3. Narmada
 - ☐ 4. Indus

Q.30 The administrative and military reforms reflected the broader British strategy in India after the Revolt of 1857. Which of the following statements best captures the underlying rationale?

- Ans**
- ☐ 1. The reforms sought to completely eliminate native influence by imposing direct European control in every sphere of life.
 - ☐ 2. The reforms were solely aimed at boosting British military strength without any administrative changes.
 - ☒ 3. The reforms integrated local traditions with a strong centralised British administrative and military structure, thus minimising the risk of future uprisings.
 - ☐ 4. The reforms focused exclusively on creating a participatory democratic system in India.

Section : Professional Ability

Q.1 A converging lens is also known as:

- Ans**
- ☐ 1. Concave lens
 - ☒ 2. Convex lens
 - ☐ 3. Plano-concave lens
 - ☐ 4. Plano-convex lens

Q.2	Which device is commonly used as a low vision aid?
Ans	<div><div><input checked="" type="checkbox"/></div>1. Magnifying glass</div> <div><div><input type="checkbox"/></div>2. Eyeglasses</div> <div><div><input type="checkbox"/></div>3. Contact lenses</div> <div><div><input type="checkbox"/></div>4. Intraocular lens</div>
Q.3	What is discharge planning's primary goal?
Ans	<div><div><input type="checkbox"/></div>1. To make sure the patient gets their prescription on schedule</div> <div><div><input type="checkbox"/></div>2. To get the hospital room ready for the next patient</div> <div><div><input type="checkbox"/></div>3. To let guests know how the patient is doing</div> <div><div><input checked="" type="checkbox"/></div>4. To guarantee that the patient's treatment continues after they leave the hospital</div>
Q.4	According to Indian and international low vision classification standards, which of the following best defines severe visual impairment?
Ans	<div><div><input type="checkbox"/></div>1. Visual acuity less than 3/60 in the better eye, or visual field less than 10 degrees.</div> <div><div><input type="checkbox"/></div>2. Visual acuity less than 6/18 in either eye regardless of correction status.</div> <div><div><input type="checkbox"/></div>3. Visual acuity less than 6/18 but equal to or better than 6/60 in the better eye with best correction.</div> <div><div><input checked="" type="checkbox"/></div>4. Visual acuity less than 6/60 but equal to or better than 3/60 in the better eye with best correction.</div>
Q.5	Which of the following structures plays a primary role in the outflow of aqueous humor and is most commonly implicated in the pathophysiology of primary open-angle glaucoma?
Ans	<div><div><input type="checkbox"/></div>1. Zonules of Zinn</div> <div><div><input type="checkbox"/></div>2. Iris root</div> <div><div><input checked="" type="checkbox"/></div>3. Schlemm's canal</div> <div><div><input type="checkbox"/></div>4. Vitreous body</div>
Q.6	Which of the following is a common structural change that occurs in the eye of elderly individuals?
Ans	<div><div><input checked="" type="checkbox"/></div>1. Hardening of the lens (presbyopia)</div> <div><div><input type="checkbox"/></div>2. Increased corneal thickness</div> <div><div><input type="checkbox"/></div>3. Decreased retinal pigmentation</div> <div><div><input type="checkbox"/></div>4. Increase in intraocular pressure (IOP)</div>
Q.7	Which of the following is the correct order of steps involved in the routine processing of tissue specimens for histopathological examination?
Ans	<div><div><input type="checkbox"/></div>1. Fixation → Sectioning → Staining → Embedding → Dehydration</div> <div><div><input checked="" type="checkbox"/></div>2. Fixation → Dehydration → Embedding → Staining → Sectioning</div> <div><div><input type="checkbox"/></div>3. Sectioning → Fixation → Dehydration → Staining → Embedding</div> <div><div><input type="checkbox"/></div>4. Dehydration → Fixation → Staining → Embedding → Sectioning</div>
Q.8	Which of the following most accurately describes the role of lamina cribrosa deformation in the pathogenesis of glaucomatous optic neuropathy?
Ans	<div><div><input checked="" type="checkbox"/></div>1. It leads to axoplasmic flow stasis at the level of the lamina cribrosa, resulting in retinal ganglion cell apoptosis through mechanical and vascular compromise.</div> <div><div><input type="checkbox"/></div>2. It facilitates increased uveoscleral outflow, reducing intraocular pressure but increasing translaminal pressure gradient.</div> <div><div><input type="checkbox"/></div>3. It causes anterior displacement of the optic nerve head, reducing retinal blood supply due to posterior ciliary artery compromise.</div> <div><div><input type="checkbox"/></div>4. It primarily impedes aqueous humor outflow, raising intraocular pressure and causing mechanical compression of the iris.</div>

Q.9	Which of the following is the most common cause of refractive error in the human eye?
Ans	<div><div><input type="checkbox"/></div><div>1. Presbyopia</div></div> <div><div><input checked="" type="checkbox"/></div><div>2. Myopia</div></div> <div><div><input type="checkbox"/></div><div>3. Cataract</div></div> <div><div><input type="checkbox"/></div><div>4. Glaucoma</div></div>
Q.10	What is the primary role of the cell membrane?
Ans	<div><div><input type="checkbox"/></div><div>1. To produce energy</div></div> <div><div><input type="checkbox"/></div><div>2. To synthesise proteins</div></div> <div><div><input checked="" type="checkbox"/></div><div>3. To regulate the passage of substances in and out of the cell</div></div> <div><div><input type="checkbox"/></div><div>4. To store genetic material</div></div>
Q.11	What does the Hirschberg test primarily assess?
Ans	<div><div><input type="checkbox"/></div><div>1. Retinal detachment</div></div> <div><div><input type="checkbox"/></div><div>2. Visual acuity</div></div> <div><div><input checked="" type="checkbox"/></div><div>3. Corneal light reflex position</div></div> <div><div><input type="checkbox"/></div><div>4. Color vision</div></div>
Q.12	What is the main feature of bifocal lenses?
Ans	<div><div><input type="checkbox"/></div><div>1. They are used for color correction</div></div> <div><div><input type="checkbox"/></div><div>2. They are designed for single-vision use</div></div> <div><div><input checked="" type="checkbox"/></div><div>3. They have two different focal lengths</div></div> <div><div><input type="checkbox"/></div><div>4. They are used only for reading</div></div>
Q.13	Which material is known for its lightweight and hypoallergenic properties in spectacle frames?
Ans	<div><div><input type="checkbox"/></div><div>1. Metal</div></div> <div><div><input type="checkbox"/></div><div>2. Plastic</div></div> <div><div><input type="checkbox"/></div><div>3. Wood</div></div> <div><div><input checked="" type="checkbox"/></div><div>4. Titanium</div></div>
Q.14	Which procedure measures the eye's focusing ability objectively?
Ans	<div><div><input type="checkbox"/></div><div>1. Color vision testing</div></div> <div><div><input type="checkbox"/></div><div>2. Visual acuity test</div></div> <div><div><input checked="" type="checkbox"/></div><div>3. Retinoscopy</div></div> <div><div><input type="checkbox"/></div><div>4. Tonometry</div></div>
Q.15	Which instrument is used to examine the anterior segment of the eye?
Ans	<div><div><input type="checkbox"/></div><div>1. Retinoscope</div></div> <div><div><input checked="" type="checkbox"/></div><div>2. Slit-lamp biomicroscope</div></div> <div><div><input type="checkbox"/></div><div>3. Ophthalmoscope</div></div> <div><div><input type="checkbox"/></div><div>4. Autorefractor</div></div>
Q.16	What does extraocular motility testing evaluate?
Ans	<div><div><input type="checkbox"/></div><div>1. Lens clarity</div></div> <div><div><input type="checkbox"/></div><div>2. Corneal thickness</div></div> <div><div><input checked="" type="checkbox"/></div><div>3. Eye muscle function</div></div> <div><div><input type="checkbox"/></div><div>4. Retinal health</div></div>

Q.17 What is accommodation in the eye?

- Ans**
- ☐ 1. The ability to perceive depth
 - ☒ 2. The ability to focus on near objects
 - ☐ 3. The ability to detect colour
 - ☐ 4. The ability to see distant objects clearly

Q.18 Which of the following statements correctly describes the clinical significance of the brachial plexus in relation to arm movement?

- Ans**
- ☒ 1. The brachial plexus is responsible for the movement of the muscles in the upper limb, and its injury can result in paralysis of the arm muscles.
 - ☐ 2. The brachial plexus only contributes to sensation in the arm and does not play a role in motor control.
 - ☐ 3. The brachial plexus exclusively supplies the muscles of the forearm, leaving the hand unaffected in case of injury.
 - ☐ 4. The brachial plexus is located in the neck and does not affect the upper limb's motor or sensory functions.

Q.19 What is sensory adaptation in vision?

- Ans**
- ☐ 1. The ability to perceive depth
 - ☐ 2. The ability to focus on near objects
 - ☐ 3. The ability to detect motion
 - ☒ 4. The ability to adjust to different light levels

Q.20 Which of the following is the most common cause of enophthalmos associated with orbital fractures, and how does it impact the anatomy of the eye?

- Ans**
- ☐ 1. Superior orbital fissure syndrome causing impaired ocular movements and subsequent globe retraction.
 - ☐ 2. Medial wall fracture leading to entrapment of the inferior rectus muscle, which affects the motility and positioning of the eye.
 - ☐ 3. Zygomatic arch fracture resulting in the fracture of the zygomatic bone and no significant change in the orbital volume.
 - ☒ 4. Orbital floor fracture leading to herniation of the orbital fat, which results in the posterior displacement of the globe.

Q.21 Which of the following immune cells plays a key role in the pathogenesis of uveitis, an immune-mediated ocular disease?

- Ans**
- ☒ 1. T lymphocytes
 - ☐ 2. Neutrophils
 - ☐ 3. Basophils
 - ☐ 4. Eosinophils

Q.22 Which type of diabetes is also called childhood diabetes?

- Ans**
- ☐ 1. Prediabetes
 - ☒ 2. Type-1
 - ☐ 3. Type-2
 - ☐ 4. Gestational diabetes

Q.23 Which instrument is used to measure refractive error?

- Ans**
- ☐ 1. Keratometer
 - ☒ 2. Retinoscope
 - ☐ 3. Tonometer
 - ☐ 4. Slit lamp

Q.24 Which of the following refractive errors is characterized by difficulty in seeing objects at a distance, and is typically corrected by a concave lens?

- Ans**
- ☐ 1. Presbyopia
 - ☐ 2. Hyperopia
 - ☒ 3. Myopia
 - ☐ 4. Astigmatism



Q.25 Which of the following is the most commonly used fixative in routine histopathological tissue processing?

- Ans**
- ☐ 1. Ethanol
 - ☒ 2. Formalin
 - ☐ 3. Osmium tetroxide
 - ☐ 4. Acetic acid

Q.26 What is the primary purpose of the Cover Test in clinical optometry?

- Ans**
- ☐ 1. To check the visual acuity of each eye separately
 - ☒ 2. To evaluate ocular motility and detect binocular vision problems
 - ☐ 3. To assess the refractive error of both eyes
 - ☐ 4. To measure intraocular pressure

Q.27 What does a fundal camera capture?

- Ans**
- ☐ 1. The iris
 - ☐ 2. The cornea
 - ☐ 3. The lens
 - ☒ 4. The retina

Q.28 Which of the following is a primary response of ocular tissues during the inflammation process?

- Ans**
- ☐ 1. Inhibition of immune cell activity
 - ☐ 2. Reduced blood flow to the affected area
 - ☐ 3. Complete healing without scarring
 - ☒ 4. Vasodilation and increased permeability of blood vessels

Q.29 Which cranial nerve is responsible for eye movement?

- Ans**
- ☒ 1. Oculomotor nerve (III)
 - ☐ 2. Facial nerve (VII)
 - ☐ 3. Optic nerve (II)
 - ☐ 4. Trigeminal nerve (V)

Q.30 Which of the following clinical findings would most likely indicate a convergence insufficiency in a patient, as described in the literature on binocular vision and ocular motility?

- Ans**
- ☒ 1. The patient has difficulty maintaining a clear, single image while reading, especially at near distances and experiences eye strain or double vision when focusing on nearby objects for prolonged periods.
 - ☐ 2. The patient presents with hyperopia (farsightedness) and a significantly increased near point of convergence, but there are no complaints of visual discomfort or double vision.
 - ☐ 3. The patient has strabismus with consistent alternating exotropia and experiences intermittent diplopia, which resolves when the patient covers one eye.
 - ☐ 4. The patient exhibits a normal near point of convergence, clear single vision at near distances, and no history of eye fatigue, but reports occasional double vision during distance tasks. ;

Q.31 Which gland regulates metabolism throughout the body?

- Ans**
- ☒ 1. Thyroid
 - ☐ 2. Pancreas
 - ☐ 3. Adrenal
 - ☐ 4. Pituitary



Q.32 Which of the following is true about convergence insufficiency?

- Ans**
- ☐ 1. It is caused by excessive tear production.
 - ☐ 2. It is characterized by the inability of the eyes to move outward.
 - ☐ 3. It is unrelated to binocular vision.
 - ☒ 4. It is characterized by the inability of the eyes to move inward to focus on near objects.

Q.33 Which of the following statements best describes the mechanism of glomerular filtration in the kidneys?

- Ans**
- ☐ 1. It primarily involves the secretion of electrolytes by the proximal tubule.
 - ☐ 2. It is regulated only by the autonomic nervous system without any hormonal influence.
 - ☒ 3. It is a passive process driven by hydrostatic pressure in the glomerular capillaries.
 - ☐ 4. It occurs due to active transport of solutes across the glomerular membrane.

Q.34 The power of a lens is defined as:

- Ans**
- ☒ 1. The reciprocal of the focal length in metres
 - ☐ 2. The ratio of the object distance to the image distance
 - ☐ 3. The product of the focal length and the refractive index
 - ☐ 4. The thickness of the lens divided by its diameter

Q.35 Which among the following is the test used to assess dry eyes before fitting contact lens?

- Ans**
- ☐ 1. Retinoscopy
 - ☒ 2. Schirmer test
 - ☐ 3. Cover test
 - ☐ 4. Bruckner test

Q.36 A 4-month-old infant is presented with congenital ptosis, which is characterised by a drooping of the upper eyelid. Upon further examination, it is noted that there is a lack of the superior levator muscle function. Which of the following is the most likely underlying cause of this condition?

- Ans**
- ☐ 1. Congenital Horner's syndrome
 - ☐ 2. Marcus Gunn jaw-winking syndrome
 - ☒ 3. Congenital aponeurotic ptosis
 - ☐ 4. Blepharophimosis syndrome

Q.37 A patient is administered brimonidine tartrate for glaucoma. Which of the following correctly describes its mechanism of action and secondary benefit?

- Ans**
- ☐ 1. Alpha-1 agonist; increases trabecular outflow and causes mydriasis
 - ☒ 2. Alpha-2 agonist; decreases aqueous humor production and increases uveoscleral outflow
 - ☐ 3. Muscarinic antagonist; inhibits pupil constriction and raises intraocular pressure
 - ☐ 4. Beta-2 antagonist; increases aqueous drainage and causes cycloplegia

Q.38 Which of the following amino acids is classified as essential and must be obtained through the diet because the human body cannot synthesize it?

- Ans**
- ☒ 1. Leucine
 - ☐ 2. Alanine
 - ☐ 3. Serine
 - ☐ 4. Glycine



Q.39 What is the primary role of a spectacles dispensing shop?

- Ans**
- ☐ 1. To perform eye surgeries
 - ☐ 2. To prescribe medications
 - ☒ 3. To provide and fit corrective lenses
 - ☐ 4. To diagnose eye diseases

Q.40 Which of the following best describes an integrated approach to tackling avoidable blindness, and how does it differ from conventional models in terms of sustainability and accessibility?

- Ans**
- ☐ 1. It prioritizes expensive laser-based technologies and urban tertiary care centers, ensuring only high-income patients access services.
 - ☐ 2. It relies solely on government funding and rural volunteer work, making it cost-effective but unsustainable in the long term.
 - ☒ 3. It integrates community-based screening, cross-subsidized care, and high-volume surgical efficiency, making eye care both affordable and scalable.
 - ☐ 4. It focuses mainly on cataract surgery for elderly patients in city hospitals, limiting outreach and scalability in rural areas.

Q.41 Which of the following is a common symptom of tuberculosis (TB)?

- Ans**
- ☐ 1. Night sweats and chills
 - ☒ 2. Persistent cough with sputum
 - ☐ 3. Shortness of breath
 - ☐ 4. Swollen joints

Q.42 Which of the following lenses is designed to correct vision at three different distances?

- Ans**
- ☐ 1. Bifocal lens
 - ☒ 2. Trifocal lens
 - ☐ 3. Progressive addition lens
 - ☐ 4. Monofocal lens

Q.43 What is the primary purpose of data tabulation in biostatistical analysis?

- Ans**
- ☐ 1. To eliminate data outliers
 - ☐ 2. To perform complex calculations
 - ☒ 3. To organize raw data systematically
 - ☐ 4. To create visual graphs

Q.44 Which of the following best explains the neural control of reflex lacrimation in response to corneal irritation?

- Ans**
- ☐ 1. Parasympathetic fibers originating in the Edinger-Westphal nucleus directly innervate the lacrimal acini
 - ☐ 2. Norepinephrine, sympathetic innervation from the superior cervical ganglion promotes lacrimal gland output
 - ☐ 3. Sensory fibers from the oculomotor nerve activate the lacrimal gland through direct motor input
 - ☒ 4. Parasympathetic fibers from the pterygopalatine ganglion stimulate the lacrimal gland via acetylcholine and vasoactive intestinal peptide (VIP)

Q.45 Which concept represents the additional benefit gained by consuming one more unit of a healthcare service?

- Ans**
- ☐ 1. Demand elasticity
 - ☒ 2. Marginal utility
 - ☐ 3. Cost-effectiveness
 - ☐ 4. Opportunity cost



Q.46 Which of the following is a correct statement about the index of refraction in spectacle lens materials?

- Ans**
- ☒ 1. A higher refractive index allows the lens to bend light more efficiently, making it thinner.
 - ☐ 2. The refractive index has no effect on lens thickness.
 - ☐ 3. High-index lenses are always heavier than standard plastic lenses.
 - ☐ 4. A lower refractive index means the lens will be thinner for the same prescription.

Q.47 What is the primary use of an ophthalmoscope?

- Ans**
- ☐ 1. To measure intraocular pressure
 - ☐ 2. To assess corneal thickness
 - ☒ 3. To examine the retina
 - ☐ 4. To test visual acuity

Q.48 Which infection is caused by the varicella zoster virus?

- Ans**
- ☒ 1. Herpes zoster ophthalmicus
 - ☐ 2. Keratitis
 - ☐ 3. Endophthalmitis
 - ☐ 4. Conjunctivitis

Q.49 Which of the following glass forming processes is most suitable for producing hollow objects like bottles?

- Ans**
- ☒ 1. Blow and blow process
 - ☐ 2. Float process
 - ☐ 3. Rolling
 - ☐ 4. Pressing

Q.50 What are the two base pairs in DNA?

- Ans**
- ☐ 1. Adenine-Guanine and Thymine-Cytosine
 - ☐ 2. Adenine-Cytosine and Guanine-Thymine
 - ☒ 3. Adenine-Thymine and Guanine-Cytosine
 - ☐ 4. Adenine-Uracil and Guanine-Cytosine

Q.51 Which of the following is the most effective preventive measure against occupational vision problems related to prolonged exposure to digital screens?

- Ans**
- ☐ 1. Frequent use of artificial tears to prevent eye dryness.
 - ☐ 2. Continuous use of blue light blocking glasses without any breaks.
 - ☒ 3. The 20-20-20 rule, which involves looking at something 20 feet away for 20 seconds every 20 minutes.
 - ☐ 4. Reducing ambient lighting in the workplace to decrease glare.

Q.52 What does the Hirschberg test primarily assess?

- Ans**
- ☐ 1. Refractive error
 - ☐ 2. Intraocular pressure
 - ☐ 3. Visual acuity
 - ☒ 4. Ocular alignment

Q.53 What term describes excessive cell growth in a tissue?

- Ans**
- ☐ 1. Hypertrophy
 - ☐ 2. Dysplasia
 - ☐ 3. Atrophy
 - ☒ 4. Hyperplasia



Q.54	Which of the following is the primary treatment modality for coronary artery disease (CAD) in patients with significant stenosis and refractory angina?
Ans	<div><div><input type="checkbox"/></div>1. Beta-blockers</div> <div><div><input type="checkbox"/></div>2. Statin therapy</div> <div><div><input type="checkbox"/></div>3. Lifestyle modifications</div> <div><div><input checked="" type="checkbox"/></div>4. Coronary artery bypass grafting (CABG)</div>
Q.55	What does a slit lamp examine?
Ans	<div><div><input checked="" type="checkbox"/></div>1. The anterior segment of the eye</div> <div><div><input type="checkbox"/></div>2. The visual field</div> <div><div><input type="checkbox"/></div>3. The retina</div> <div><div><input type="checkbox"/></div>4. The optic nerve</div>
Q.56	What is the primary use of topical corticosteroids in ophthalmology?
Ans	<div><div><input type="checkbox"/></div>1. To dilate the pupil</div> <div><div><input checked="" type="checkbox"/></div>2. To reduce inflammation</div> <div><div><input type="checkbox"/></div>3. To lower intraocular pressure</div> <div><div><input type="checkbox"/></div>4. To treat bacterial infections</div>
Q.57	Which of the following medications, commonly prescribed to elderly patients, is most likely to cause blurred vision or difficulty focusing, as a result of its anticholinergic effects, which impair accommodation in older adults?
Ans	<div><div><input checked="" type="checkbox"/></div>1. Antihistamines (e.g., Diphenhydramine)</div> <div><div><input type="checkbox"/></div>2. Beta-blockers (e.g., Timolol)</div> <div><div><input type="checkbox"/></div>3. Angiotensin-converting enzyme inhibitors (e.g., Lisinopril)</div> <div><div><input type="checkbox"/></div>4. Prostaglandin analogs (e.g., Latanoprost)</div>
Q.58	What is a common patient reaction to sudden vision loss?
Ans	<div><div><input type="checkbox"/></div>1. Excitement</div> <div><div><input type="checkbox"/></div>2. Indifference</div> <div><div><input checked="" type="checkbox"/></div>3. Panic</div> <div><div><input type="checkbox"/></div>4. Confusion</div>
Q.59	What is a common cause of eyelid oedema?
Ans	<div><div><input checked="" type="checkbox"/></div>1. Allergic reaction</div> <div><div><input type="checkbox"/></div>2. Dry eye syndrome</div> <div><div><input type="checkbox"/></div>3. Myopia</div> <div><div><input type="checkbox"/></div>4. Astigmatism</div>
Q.60	Which of the following muscles is primarily responsible for the flexion of the elbow joint?
Ans	<div><div><input type="checkbox"/></div>1. Biceps brachii</div> <div><div><input type="checkbox"/></div>2. Coracobrachialis</div> <div><div><input type="checkbox"/></div>3. Triceps brachii</div> <div><div><input checked="" type="checkbox"/></div>4. Brachialis</div>
Q.61	What is a common ocular manifestation of rheumatoid arthritis?
Ans	<div><div><input type="checkbox"/></div>1. Glaucoma</div> <div><div><input checked="" type="checkbox"/></div>2. Uveitis</div> <div><div><input type="checkbox"/></div>3. Retinal detachment</div> <div><div><input type="checkbox"/></div>4. Cataract</div>

Q.62 What is the primary purpose of spectacles?

- Ans**
- ☐ 1. To enhance color vision
 - ☐ 2. To treat eye infections
 - ☒ 3. To correct refractive errors
 - ☐ 4. To protect the eyes from UV light

Q.63 What is the primary goal of low vision services?

- Ans**
- ☒ 1. To maximize remaining vision
 - ☐ 2. To prevent eye diseases
 - ☐ 3. To provide surgical interventions
 - ☐ 4. To restore normal vision

Q.64 What is uniocular movement?

- Ans**
- ☐ 1. Movement of the eyelids
 - ☐ 2. Movement of both eyes together
 - ☒ 3. Movement of one eye independently
 - ☐ 4. Movement of the pupil

Q.65 Which autacoid is involved in allergic reactions?

- Ans**
- ☐ 1. Bradykinin
 - ☐ 2. Serotonin
 - ☒ 3. Histamine
 - ☐ 4. Prostaglandin

Q.66 Which of the following spectacle lens types is most suitable for patients with presbyopia and astigmatism, and what is the disadvantage associated with this type?

- Ans**
- ☐ 1. Single vision lenses – do not correct presbyopia
 - ☐ 2. Bifocal lenses – may cause night vision problems due to chromatic aberration
 - ☒ 3. Progressive addition lenses – may cause peripheral distortion and adaptation difficulty
 - ☐ 4. Plano-convex lenses – do not correct astigmatism or presbyopia

Q.67 What is the primary effect of a concave lens on light that passes through it in terms of refraction through spherical surfaces?

- Ans**
- ☒ 1. It causes light rays to diverge away from the optical axis.
 - ☐ 2. It bends light rays parallel to the optical axis.
 - ☐ 3. It focuses light rays to the retina.
 - ☐ 4. It causes light rays to converge at a single point.

Q.68 A 52-year-old patient with Type 2 diabetes mellitus presents with fasting triglyceride levels of 650 mg/dL, total cholesterol of 230 mg/dL, and low HDL-C. According to current lipid management guidelines and the principles outlined in Manual of Lipidology and Handbook of Lipidology, what should be the primary treatment goal and first-line pharmacological intervention in this patient?

- Ans**
- ☐ 1. Increasing HDL-C with niacin; start extended-release niacin
 - ☒ 2. Reducing triglycerides to <500 mg/dL; initiate high-dose omega-3 fatty acids
 - ☐ 3. Lowering LDL-C with statins; initiate atorvastatin
 - ☐ 4. Initiate fibrates to target elevated triglycerides and LDL-C simultaneously



Q.69 Which of the following is the most appropriate fixative for preserving tissue specimens for subsequent section cutting and staining in histopathology?

- Ans**
- ☒ 1. Formalin
 - ☐ 2. Alcohol
 - ☐ 3. Buffered saline
 - ☐ 4. Acetone

Q.70 Which organism causes conjunctivitis?

- Ans**
- ☐ 1. *Neisseria gonorrhoeae*
 - ☒ 2. *Staphylococcus aureus*
 - ☐ 3. Human Papilloma Virus
 - ☐ 4. *Mycobacterium tuberculosis*

