

Part 2 FRCOphth Written Sample MCQs



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1. Trauma

A four year old boy is seen in the Emergency Department with an 8mm laceration of the upper lid not involving the lid margin. He says that he injured his eye on the corner of the table. He has mild ptosis on the left side and there is herniation of orbital fat through the laceration. The eye examination is normal. Which of the following is the next MOST appropriate step?

- A. CT of the orbit
- B. Glue the laceration
- C. MRI of the orbit
- D. Ultrasound the orbit

Correct Response: A

Which one of the following statements is MOST likely to be correct for a patient presenting with a symptomatic retinal dialysis?

- A. Other signs of blunt ocular trauma are usually present
- B. The duration of the retinal detachment is generally a week or less
- C. The macula is likely to be detached
- D. The site of the dialysis is most commonly infero-nasal

Correct Response: C

2. Orbit and oculoplastics

A 40 year old man has been having chemotherapy for acute leukaemia. He has slowly developed orbital inflammation and proptosis. A CT scan of the orbit shows inflammation in the ethmoid and maxillary sinuses with some bony erosion and a low density area adjacent to the ethmoid sinus in the orbit. The organism responsible was difficult to culture but did stain with haematoxylin and eosin. Which of the following is the MOST likely diagnosis?

- A. Aspergillosis
- B. Mucormycosis
- C. Staphylococcus aureus
- D. Treponema pallidum

Correct Response: A

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A 32 year old man presents with a sudden onset of painful right sided proptosis and ophthalmoplegia following a fall from a ladder. What is the MOST likely diagnosis?

- A. Direct carotid cavernous fistula
- B. Fracture of zygomatic arch
- C. Indirect carotid cavernous fistula
- D. Orbital varices

Correct Response: A

3. Glaucoma

A 77 year old woman presents with deteriorating vision in the left eye for several years. On examination the eye is red and painful, the intraocular pressure is 60mmHg left eye and 18mmHg right eye. There is left corneal oedema. The anterior chambers are deep particularly on the left. There is flare and cells on the left and a white lens. What is the MOST likely diagnosis?

- A. Fuch's heterochromic uveitis
- B. Phacolytic glaucoma
- C. Phacomorphic glaucoma (intumescent lens)
- D. Posner-Schlossman uveitis

Correct Response: B

A 63 year old man presented with an intraocular pressure (IOP) of 23mmHg. He is currently using topical G latanoprost and timolol once daily to both eyes. He now has an IOP of 18mmHg in both eyes with corneal thickness of 500 microns. The optic discs show a cup disc ratio of 0.6 right eye with no field loss. In the left eye, the disc is 0.9, with an increasing nasal arcuate field loss. According to NICE CG85 what would be the MOST appropriate next line of management for the left eye?

- A. Add G brimonidine twice a day
- B. Augmented trabeculectomy
- C. MRI scan of orbit and brain
- D. Selective laser trabeculoplasty

Correct Response: B

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A 60 year old woman with a family history of glaucoma is referred by the optometrist with deteriorating vision and an arcuate field defect in the left eye. The corrected visual acuity is 6/9 right eye and 6/18 left eye. The media are clear. The intraocular pressure is 25mm Hg in both eyes with corneal thickness of 580 microns. The left eye has mild optic atrophy and peripapillary choroidal atrophy. What would be the MOST appropriate next line of management?

- A. MRI scan of orbit and brain
- B. Review in 3-4 months with further visual fields
- C. Start treatment with latanoprost eye drops
- D. Visual evoked potentials

Correct Response: A

4. Strabismus

A 60 year old man presents with double vision on left gaze. Examination findings include reduced adduction in the right eye but normal convergence. Which one of the following is the MOST likely diagnosis?

- A. Duane's syndrome Type 3
- B. Internuclear ophthalmoplegia
- C. Moebius syndrome
- D. Sixth nerve palsy

Correct Response: B

“V” pattern strabismus is MOST likely to be associated with which of the following?

- A. Brown's syndrome
- B. Inferior oblique overaction
- C. Inferior rectus weakness
- D. Superior oblique overaction

Correct Response: B

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5. Paediatric Ophthalmology

A two year old girl is referred because her mother suspects poor sight. There is no family history of eye disease. The parents are first cousins. Fundal examination is difficult because of photophobia, but there is no gross retinal abnormality. Electroretinography indicates a reduced photopic ERG, a normal scotopic ERG and an absent flicker ERG. What is the MOST likely diagnosis?

- A. Achromatopsia
- B. Albinism
- C. Congenital stationary night blindness
- D. Leber's congenital amaurosis

Correct Response: A

According to the ETROP study, the presence of which one of the following would indicate that a patient should be treated for retinopathy of prematurity (ROP)?

- A. Any form of zone 2 disease
- B. Greater than five hours of stage 3 disease
- C. Persistent Tunica vasculosa lentis
- D. Plus disease

Correct Response: D

6. Retina

Which one of the following statements regarding Coat's disease is MOST likely to be correct?

- A. Anti-VEGF is the first line treatment
- B. It can present in adults
- C. Telangiectasia is limited to the macula region
- D. Treatment often includes vitrectomy and laser treatment

Correct Response: B

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As per the NICE guideline (TA274) on diabetic macular oedema (DMO), what is the MOST likely initial treatment option for DMO more than 400um with foveal involvement?

- A. Argon laser treatment
- B. Dexamethasone implant
- C. Fluocinolone acetonide implant
- D. Intravitreal course of Ranibizumab injections

Correct Response: D

In the International Vitreomacular Traction Study Classification system which one of the following is LEAST likely to be correct?

- A. Classification is based on macula OCT findings
- B. Full thickness macular holes <250 um can be managed by pharmacological vitreolysis
- C. The size of vitreomacular traction is considered focal if <1500 um in extent
- D. Vitreomacular adhesion is equivalent to a Gass Stage 1 macular hole

Correct Response: D

A 65 year old Asian man has an acute submacular haemorrhage in one eye and a sero-sanguinous retinal pigment epithelial detachment in the other eye. Which one of the following is the MOST likely diagnosis?

- A. Doyme's honeycomb macular dystrophy
- B. Macular telangiectasia
- C. Polypoidal choroidal vasculopathy
- D. Retinal vasculitis

Correct Response: C

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A 28 year old diabetic woman, who has had no previous laser, has a recurrent vitreous haemorrhage limiting retinal visualisation. Which one of the following is the MOST appropriate course of action?

- A. Intravitreal anti-VEGF injection
- B. Pan retinal photocoagulation (PRP) under local anaesthesia
- C. Prompt vitrectomy and laser
- D. Wait two months to allow spontaneous clearing, followed by vitrectomy and laser if not

Correct Response: C

With regard to idiopathic macular holes, which one of the following statements is MOST likely to be correct?

- A. It is acceptable to omit face down posturing following vitrectomy and gas for a small macular hole
- B. It is not usually necessary to peel the internal limiting membrane when operating on a small macular hole
- C. OCT scans at routine optometric examinations are advisable to screen for macular holes
- D. Prompt repair of a small asymptomatic hole is generally advised to improve long-term visual outcome

Correct Response: A

7. Cataract

According to the ESCRS 2013 guidelines, which one of the following drugs is the drug of choice in preventing post-operative endophthalmitis?

- A. Intracameral amikacin
- B. Intracameral cefotaxime
- C. Intracameral cefuroxime
- D. Intracameral vancomycin

Correct Response: C

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You are considering performing cataract surgery on a 50 year old patient with a refraction of -0.50 sphere. The patient had excimer laser for myopia ten years previously. Which one of the following is the MOST likely complication of cataract surgery?

- A. Cystoid macular oedema
- B. Dislocated intra ocular lens
- C. Hypermetropic refractive surprise
- D. Retinal detachment

Correct Response: C

During a phaco-emulsification procedure a patient develops "Reverse pupil block". Which manoeuvre is MOST likely to be effective at preventing excessive depth of the anterior chamber?

- A. Intravenous mannitol
- B. Reducing the bottle height on the Phako machine
- C. Surgical Iridotomy
- D. Using a second instrument to lift the iris forward

Correct Response: D

8. Cornea and external eye

Specular microscopy reveals a patient's cornea to have 60% non-hexagonal endothelial cells. Which one of the following is the MOST likely diagnosis?

- A. Congenital hereditary endothelial dystrophy
- B. Fuch's endothelial dystrophy
- C. Maumenee's corneal dystrophy
- D. Posterior polymorphous corneal dystrophy

Correct Response: B

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What is the MOST common autoimmune condition associated with peripheral ulcerative keratitis?

- A. Granulomatosis with Polyangiitis (Wegener Granulomatosis)
- B. Relapsing polychondritis
- C. Rheumatoid Arthritis
- D. Systemic lupus erythematosus (SLE)

Correct Response: C

A patient has splashed a detergent into their eye. After irrigation there is conjunctival injection and punctate keratopathy. There is no obvious limbal ischaemia and no epithelial defect. What would be the MOST appropriate next line of management?

- A. Topical antibiotic and analgesia
- B. Topical antibiotic, steroid and analgesia
- C. Topical potassium ascorbate, antibiotic and steroid
- D. Topical potassium citrate and antibiotic

Correct Response: A

With regard to ocular cicatricial pemphigoid (OCP) which one of the following is MOST likely to be correct?

- A. A negative biopsy does not exclude the diagnosis of OCP
- B. OCP is usually self-limiting and will enter a “burnt-out” period without treatment in most cases
- C. Presence of lymphocytes and goblet cells at the basement layer is the pathognomonic feature of OCP
- D. When a conjunctival biopsy is taken, only an incisional biopsy within the scarred conjunctiva should be taken

Correct Response: A

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9. Uveitis and Oncology

With regard to squamous cell carcinoma of the conjunctiva, which one of the following is MOST likely to be correct?

- A. Enucleation is required in the majority of the patients
- B. If left untreated it is most likely to metastasise to lungs and liver
- C. It typically affects patients between 20 and 40 years old
- D. The mortality rate is approximately 1-2%

Correct Response: D

A 55 year old female presents with a past history of herpes simplex keratitis and a painful eye. On examination an anterior uveitis is present. Which of the following would LEAST likely to be consistent with the underlying diagnosis of herpes simplex uveitis?

- A. Mutton fat keratic precipitates
- B. Raised intraocular pressure
- C. ReduReduced corneal sensation
- D. Sectoral iris transillumination

Correct Response: A

Which one of the following conditions is MOST likely to have a well-recognised association with necrotising anterior scleritis?

- A. Behçet's disease
- B. Granulomatosis with polyangiitis
- C. Systemic sclerosis
- D. Tubulointerstitial nephritis and uveitis syndrome

Correct Response: B

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10. Neuro ophthalmology

A 24 year old man has been feeling slightly unwell for two weeks and complains of constant headaches. His visual acuity is 0.00 LogMAR each eye. His optic discs appear swollen. There are scattered retinal haemorrhages and cotton wool spots in both eyes. Which one of the following is the MOST likely diagnosis?

- A. Diabetic retinopathy
- B. Idiopathic intracranial hypertension
- C. Malignant hypertension
- D. Optic nerve drusen

Correct Response: C

A 64 year old male driving instructor presents with a six year history of episodic horizontal double vision. His symptoms are worse when he is tired but are extremely variable and on some days he is fine. He has had four squint operations in the past. On examination abduction is variable in each eye but his saccades are brisk. Convergence is excellent. What is the MOST likely diagnosis?

- A. Mitochondrial myopathy
- B. Myasthenia gravis
- C. Paraneoplastic cerebellar syndrome
- D. Thyroid eye disease

Correct Response: B

A 24 year old woman, with a known history of idiopathic intracranial hypertension (IIH), is 22 weeks pregnant presents with worsening headaches and visual obscurations. She has good visual acuity but florid papilloedema. She is on no treatment. What is the MOST appropriate immediate treatment?

- A. Lumbar puncture
- B. Optic nerve sheath decompression
- C. Ventriculoperitoneal shunt
- D. Weight loss

Correct Response: A

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A 75 year old hypertensive woman wakes with painless loss of vision in the right eye. She has a visual acuity of 6/12 in the right eye and 6/6 in the left eye. Her right visual field shows an altitudinal defect. Her right optic disc is swollen. She has a CRP of 5 mg/L and a blood sugar of 13.5 mmol/L. Which of the following is the MOST likely diagnosis?

- A. Arteritic anterior ischaemic optic neuropathy
- B. Diabetic papillopathy
- C. Non-arteritic anterior ischaemic optic neuropathy
- D. Optic neuritis

Correct Response: C

11. Genetics

Which ONE of the following exhibits X-linked dominant inheritance?

- A. Aicardi's syndrome
- B. Fabry's disease
- C. Myotonic dystrophy
- D. Norrie disease

Correct Response: A

12. Pharmacology

With regard to Ranibizumab, which of the following statements is MOST likely to be correct?

- A. Estimated vitreous elimination half-life is approximately 30 days
- B. Ranibizumab binds to all isoforms of VEGF-A (Vascular Endothelial Growth Factor A)
- C. Ranibizumab contains an Fc antibody fragment
- D. Ranibizumab is glycosylated with a molecular weight of 149kD

Correct Response: B

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Which one of the following is LEAST likely to be a possible effect of topical pilocarpine 4%?

- A. Bradycardia
- B. Deepening of the anterior chamber
- C. Increased aqueous outflow
- D. Increased refractive power

Correct Response: B

13. Ophthalmic Investigations

Which one of the following statements is LEAST likely to be correct concerning indocyanine green (ICG) angiography?

- A. ICG absorption and reflection occurs at 805 and 835 nm respectively
- B. ICG has high first pass metabolism so angiography is not affected by recirculation of dye
- C. It is safe to use in someone on renal dialysis
- D. It is the investigation of choice in acute multifocal placoid pigment epitheliopathy

Correct Response: C

Which one of the following statements is MOST accurate when describing the properties of a placido-disc based topography system?

- A. Accurate fixation is essential
- B. Patient movement is compensated for
- C. The second Purkinje-Sanson image is captured
- D. Useful data is obtained from the central cornea

Correct Response: A

14. Orthoptic Investigations

Which one of the following tests for stereopsis relies upon the use of polarised light?

- A. Frisby test
- B. Lang stereotest
- C. Titmus Wirt test

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D. TNO test

Correct Response: C

With regard to the Hess chart, which of the following statements is LEAST likely to be correct?

- A. A compressed field implies a restrictive pathology
- B. A patient requires normal retinal correspondence in order to perform the test
- C. Each small square subtends an angle of 5 degrees
- D. Sloping fields indicate cyclotorsion

Correct Response: D

15. Neuro Imaging

Which one of the following would be the MOST useful MRI scan mode to detect inflammation involving extraocular muscles?

- A. FLAIR sequence
- B. STIR sequence
- C. T1 weighted
- D. T2 weighted

Correct Response: B

16. Statistics

In the ETDRS study for laser treatment of diabetic macular oedema moderate visual loss occurred in 12% of treated eyes compared to 24% of untreated eyes in 3 years. What is the value of NNT (numbers needed to treat) in this study approximately?

- A. 2
- B. 6
- C. 9
- D. 12

Correct Response: C

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17. Research

Which one of the following trials showed that Argon laser panretinal photocoagulation reduced the risk of severe visual loss by more than 50% in proliferative or severe non-proliferative diabetic retinopathy?

- A. Diabetic Retinopathy Study (DRS)
- B. Diabetic Retinopathy Vitrectomy Study (DRVS)
- C. Early Treatment Diabetic Retinopathy Study (ETDRS)
- D. United Kingdom Prospective Diabetes Study (UKPDS)

Correct Response: A

18. Ethics

A 40 year old female carrier of X linked retinitis pigmentosa attends a genetic clinic with her 15 year old daughter and asks for predictive testing for the daughter. The causative mutation has been identified in the family. Which one of the following is the MOST appropriate course of action to take?

- A. Carry out the test as requested
- B. Carry out the test if the daughter agrees and understands the implications
- C. Decline testing until the daughter is of adult age (16)
- D. Delay the decision until both parents are in attendance and agree to testing

Correct Response: B

19. Guidelines

According to the guidance published by The Royal College of Ophthalmologists which one of the following isolated findings would NOT qualify for referral to a tertiary centre in a patient with a suspected ocular tumour?

- A. A choroidal lesion, 2.0 mm thick, with orange pigment
- B. An asymptomatic melanocytic choroidal lesion which is 2.5 mm thick
- C. A palpebral conjunctival melanocytic lesion 3.5 mm diameter
- D. A pigmented iris nodule, which is 2.0 mm in diameter

Correct Response: D