

DNB QUESTION BANK 2009-2015

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DNB Topic Wise Question Bank (2009-2015)

GENERAL

JUN 2009

1. Describe pharmacological properties, mechanism of action and side effects of antiviral drugs used in ophthalmology.
2. Describe posterior ciliary circulation.

DEC 2009

3. Describe three most ophthalmic emergencies requiring immediate management.
4. Role of stem cell in ophthalmology.

JUN 2010

5. **Role of stem cell in ophthalmology.
6. Various systemic disease affecting eye.
7. Various laser used in ophthalmology.
8. Cyclosporine- mechanism of action and clinical use in ophthalmology.
9. What are immunosuppressive agents? Give broad classification and enumerate their clinical indication in ophthalmology.
10. Describe the mechanism of action, indication, contraindication and adverse effect of Botulinum toxin injection with specific relation to ophthalmology.

DEC 2010

11. ***Role of stem cell in ophthalmology.
12. Write down indications, contraindications, pharmacology, side effects of cycloplegics commonly used in ophthalmology.
13. **Write down anterior and posterior ciliary circulation and depict it by diagram.

JUN 2011

14. Enumerate important pro-inflammatory cytokines. What roles do they play in ocular inflammation? 4+6
15. **What is Botulinum toxin? Discuss its use in the management of various ocular diseases. 2+8

DEC 2011

16. **Discuss role of anti-metabolites and immunosuppressive drugs in Ophthalmology. 10

JUN 2012

17. What is femtosecond Laser? Discuss the use of femtosecond laser system in ophthalmology.



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18. Enumerate various preservatives used in ophthalmic topical drugs. Discuss their ocular side effects.
19. Enumerate principle, advantages and disadvantages for various modalities for anterior segment imaging.

DEC 2012

20. ***Discuss the pharmacology, indications for use and adverse effects of botulinum toxins in Ophthalmology.
21. **Write briefly about UBM and OCT in anterior segment diagnostics with potential limitations and clinical applications.

JUN 2013

22. What is the principle of Optical Coherence tomography? What are its uses in corneal end retinal diseases? 2+4+4
23. Discuss the role of genetics In Ophthalmology. 10
24. To establish an ocular microbiology lab which all medias to be needed. Name the diseases in which each of these media is useful. 6+4

DEC 2013

25. Discuss differential diagnosis of unilateral optic disc edema. How will you differentiate each condition? 10
26. What are the types, indications and complications of intraocular steroids? 2+4+4
27. Discuss the pathology, clinical features and management of pseudo exfoliation syndrome.
28. ***What are the anti-metabolites used In Ophthalmology? Discuss their clinical uses and side effects. 3+3+4
29. ****Discuss the mechanism of action, preparation and clinical uses of Botulinum toxin. Also enumerate two contraindications for its use in Ophthalmology. 2 +2+4+2

JUN 2014

30. a) How will you investigate a case of Nystagmus?
b) What are the clinical conditions in which Nystagmus is seen?
c) Management of Nystagmus.
31. Discuss the differential diagnosis, investigations and management in a 22 Year male with unilateral, profound and sudden diminution of vision.

DEC 2014

32. Structure and anatomy, embryology and management of congenital abnormalities of iris. (3+3+4)
33. What are the ocular features of HIV disease? What is the impact of HAART on ocular features?
34. Classify antifungal drugs, their clinical uses and side effects of each drug. (3+4+3)



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35. **Discuss the principles of optical coherence tomography (OCT). What are the types of OCT? Mention indications of its use. (4+2+4)
36. What are cytokines? Enumerate important pro-inflammatory cytokines. What role do they play in ocular inflammation? (5+5)
37. **What is the pharmacological mechanism of action of cyclosporine? What are its clinical uses in ophthalmology? (5+5)

JUN 2015

38. a) Enumerate causes of unilateral profound painless loss of vision.
b) How will you manage such a case in a 65-year-old male patient? (3+7)

CATARACT

JUN 2009

1. Describe intraoperative and postoperative methods to reduce posterior capsule opacifications.

DEC 2009

2. Proper management of posterior capsular rent in cataract surgery.
3. Enumerate special precaution you will take while performing phacoemulsification in a patient with age related cataract who has got poor endothelial count.
4. Management of subluxated cataractous lens.
5. Accomodative intraocular lenses.
6. Etiopathogenesis of age related cataract.

DEC 2010

7. What precaution you will take while operating a case of cataract in PXF syndrome by phacoemusification.

JUN 2011

8. **Name various systemic conditions associated with ectopia lentis. How will you manage a case of subluxated lens? (5+5)
9. What are the advantages & disadvantages of Phaco-emulsification compared to SICS and MICS? Who invented Phaco-emulsification and couching? (4+4+2)
10. Describe the common agents and techniques for local anaesthesia for cataract surgery and their potential complications. (6+4)

DEC 2011



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11. Discuss various materials and designs of intraocular lenses. (5+5)

JUN 2012

12. Discuss the principle of refractive and diffractive intraocular lenses. Give advantages and disadvantages of multifocal IOLS.

DEC 2012

13. Write short note on lens development, anatomy, lens sutures and factors affecting lens transparency.
14. What is capsular block syndrome? Classify capsular block syndrome with respect to early, intra-operative and late causes. How are they avoided and/or managed?
15. What is the role of laser in cataract surgery? Discuss its advantages with respect to conventional phacoemulsification.
16. **What are multifocal IOL's and give principle of various types of multifocal IOL's. Give advantages and disadvantages of these IOL's.

JUN 2013

17. **Briefly write on the development of crystalline lens. Enlist the biochemical mechanism of cataractogenesis. Briefly write about various congenial and developmental anomalies of lens.
3+3+4
18. What are the factors affecting the SIA (Surgery Induced Astigmatism). How do you manage these cases having pre-operative astigmatism during the surgery for cataract? 5+5
19. Define flow rate, vacuum, rise time, surge and duty cycle in phacoemulsification surgery. What are the basic principles in ultrasonic power modulations and advantages of these modulations?
1+1+1+1+1+3+2
20. What are the causes of posterior capsular rupture and how you will manage it in a phacoemulsification surgery? 5+5
21. Define complicated cataract. What are the various causes for it? How will you manage such cases?
2+4+4
22. **What are the various types of anesthesia used for cataract surgery? Describe briefly merits and demerits of each. 2+4+4
23. What are viscoelastic? How do you classify them? Briefly give the indications of each and their side effects. 1+3+4+2

DEC 2013

24. **Define in relation to Phacoemulsification: 2+2+2+4
- A. Flow rate and Vacuum
 - B. Pulse mode and Burst mode
 - C. Rise time and effective phaco time
 - D. Surge (causes and prevention)



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25. ****** Broadly classify viscoelastic substances used in ophthalmic surgery. What is soft shell technique in cataract surgery and enlist important precautions while performing phacoemulsification in cases with low corneal endothelial counts. 2+(4+4)
26. Discuss the metabolism of crystalline lens. Mention the factors responsible for cataract formation. What is the change that occurs in diabetic aetiology? 4+4+2

JUN 2014

27. ******* a) What are Multifocal IOLs?
b) What are their types and their advantages?
c) What Special Surgical Considerations will be utilized when implanting a multifocal IOL?
28. ****** a) Describe various pathways of glucose metabolism in the lens.
b) What metabolic abnormalities cause diabetic and galactosaemic cataract?
c) Describe briefly various congenital and developmental anomalies of lens.
29. a) Describe various surgical difficulties encountered when doing a phacoemulsification in a small pupil.
b) How do you manage a case of non dilating pupil for phacoemulsification.
30. A 76 Year old individual underwent phacoemulsification for grade 4 cataract. He received incompletely and developed diminution of vision 6 weeks after surgery. Discuss the causes of diminished vision and their management in brief.
31. ****** What is blade free cataract surgery? What are its advantages over conventional phacoemulsification? What are its disadvantages?
32. ****** Describe technique, advantages and disadvantages of topical, retrobulbar block, peribulbar block and facial block anaesthesia for ocular surgery.

DEC 2014

33.
a. ****** Anatomy of the crystalline lens. (3+3+4)
b. Its physiology and how it remains clear.
c. Its embryological development with suitable diagram(s).
34. ******* What is the nature of biochemical abnormality in homocystinuria? Discuss its ocular and systemic manifestations, genetics and management. 3+(4+2+1)
35. Describe various IOL power calculation formulae and how will you calculate IOL power in post refractive surgery patient? (7+3)

JUN 2015

36. ******* Causes, clinical features and management of ectopia lentis. (3+2+5)
37. ******** Indications, advantages, disadvantages and complications of a Toric multifocal intra ocular lens implantation following cataract extraction. (2+3+3+2)



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COMMUNITY OPHTHALMOLOGY

Dec 2009

1. Management of 9 months old child with grade IV PEM with bilateral Xerophthalmia.
2. Objectives of vision 2020.

JUN 2010

3. Role of various food supplement including antioxidants and vitamin A in ophthalmology.

DEC 2010

4. Write down constitution and functions of district eye relief society as mentioned in National Program for Control of Blindness.

DEC 2011

5. **Describe etiopathogenesis, clinical features, prevention and management of keratomalacia. (2+2+2+4)
6. Discuss National Programme for Control of Blindness. (10)

JUN 2012

7. Enumerate the causes of childhood blindness and measure to prevent childhood blindness.

DEC 2012

8. Write the definition of blindness as per WHO standards. Enumerate important causes of blindness as per 4 important surveys in India.

DEC 2013

9. Answer the following: 2+2+2+4
 - A. Define low vision as per WHO Criteria.
 - B. How do you evaluate a person with low vision?
 - C. What are the goals of visual rehabilitation?
 - D. Enumerate and discuss various management options of low vision.
10. **What is vision 2020? What are the diseases covered under this scheme. Briefly describe its functioning strategy.

JUN 2014

11. **Enumerate causes of childhood blindness. How will you calculate sample size and plan survey of childhood blindness in India?
12. ***What are the objectives, strategies, approaches and organization of Vision 2020 programme?

DEC 2014



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13. What is incidence and prevalence of a disease? How will you calculate sample size and plan survey for cataract blindness? (2+2)+6

JUN 2015

14. a) Measures of central tendency in a series of observations.
b) Measures of variability of individual observations. (5+5)

CORNEA

JUN 2009

1. Write down clinical picture and management of epidemic keratoconjunctivitis.
2. Give clinical picture, complications and management of fungal corneal ulcer.
3. Describe indications and methods of pterygium surgery. How to prevent recurrence?
4. Write down the methods of prevention and management of pseudophakic bullous keratopathy.
5. Describe the recent methods for the treatment of keratoconus.
6. Write down acute management of alkali burns.
7. Indications, contraindications and complications of phakic IOL in the management of high myopia.
8. Write down factors facilitating penetration of drugs through cornea.

DEC 2009

9. **Management of corneal ulcer.
10. Basic techniques of managing corneoscleral injury with vitreous prolapse.
11. Classification of conjunctivitis and its management.
12. Enumerate the complications of LASIK surgery in a myope of -8 D spherical in both eyes.
13. **Management of keratoconus.
14. Clinical features and management of acute graft rejection.

JUN 2010

15. Classification of management of dry eye.
16. **Management of corneoscleral perforation with iris prolapses in a 5 year old child after injury with bow and arrow during diwali.
17. Management of perforated corneal ulcer following bacterial keratitis.
18. Method of examination of cornea.
19. ***Management of penetrating ocular injury.
20. ***Management of keratoconus.
21. **Surgical technique of pterygium excision.

DEC 2010



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22. *** Describe modern management of Pterygium to prevent its recurrence.
23. ** Epidemic keratoconjunctivitis; etiology, management and sequelae.
24. *** Enumerate methods to prevent and treat keratoconus, giving indications of each method.
25. Give management of severe dry eye in a case of Steven Johnson syndrome.
26. What are the indications of DALK and enumerate various methods to do it.
27. ** Write down factors affecting drug penetration through cornea.

JUN 2011

28. Different clinical features of corneal ulcer due to bacterial, fungal or viral in a tabular fashion. Name two pathogens. 7+3
29. Describe latest classification of corneal dystrophies. Describe clinical features of three major corneal stromal dystrophies. How do you treat recurrent erosions by them? 3+(2×3)+1
30. Classify globe injuries and describe the injuries in the anterior segment after a closed globe injury. 10
31. Describe the different types of lamellar keratoplasty procedures and two indications of each. 10
32. What are Intacs and the potential complications of Intacs. Also name refractive surgery procedures for hyperopia. 2+6+2
33. *** Describe the barriers to drug penetration in the cornea. Define partition coefficient. Discuss the various factors affecting drug penetration through the cornea. 4+2+4

DEC 2011

34. Discuss differential diagnosis of peripheral ulcerative keratitis. Briefly outline the workup in a patient with peripheral ulcerative keratitis. (7+3)
35. Classify allergic conjunctivitis. Discuss the pathogenesis, clinical features and treatment options in vernal kerato-conjunctivitis. (2+2+3+3)
36. ** Discuss clinical features, complications and management of ocular alkali burns. (3+2+5)
37. ** Write immunological aspect, clinical features, risk factors and management of corneal graft rejection. (3+2+3+2)
38. Draw labeled diagram of tear film. What is neuronal reflex arc and its relevance to development of new modality in the treatment of dry eye? (5+3+2)
39. Write a note on “ Kerato-prosthesis”? (10)

JUN 2012

40. Describe clinical features, laboratory diagnosis, prevention and management of acanthamoeba keratitis.
41. Discuss indications, surgical procedure, complications and advances in endothelial keratoplasty.
42. *** Describe with diagram the management of a 22 year old patient presenting with corneoscleral perforation after road traffic accident 2 hours back.

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43. ***Classify fungal infections of the eye. Discuss in brief the presentation, diagnosis and specific management of fungal keratitis.
44. Describe the etiopathogenesis and histopathology of ocular surface squamous neoplasia (OSSN). Write briefly on the use of anti-metabolites in the management of OSSN.
45. ****A patient who sustained corneoscleral perforation in road traffic accident was admitted and repair was done. 3 days after the surgery he complained of photophobia and blurry vision in other eye. What is your diagnosis? How will you manage it? What are the histopathological findings expected in this case?
46. **Discuss the components of tear film and functions of each layer. Give Lemp's classification of dry eye syndrome.
47. ****Discuss the causes and presentation of pterygium. How will you manage it?
48. **What are the commonly used phakic IOL in refractive surgery? What material are they made of? What are the indications of these lenses?
49. **Discuss the clinical features, diagnosis and management of acanthamoeba keratitis.

JUN 2013

50. Enumerate the conditions associated with corneal neovascularization. Briefly discuss the mechanism and various treatment modalities with their rationale of treatment in the management of this condition. 3+3+4
51. ****Give principle of keratometry. What are the types of keratometers and basic difference between them? Give typical keratometric features in keratoconus. 4+3+3
52. What are femtosecond LASERs ? What are the current indications of femtosecond LASER in corneal refractive surgery? What is opaque bubble LASER? 3+5+2
53. How do you diagnose severe ocular surface disease? Discuss causes and management of these entities, when existing in unilateral and bilateral manner. 3+(3+4)
54. **Describe the pathophysiology of vernal keratoconjunctivitis (VKC) correlating with clinical picture and rationale of treatment. 4+3+3
55. What is Scheimpflug's principle? How is it useful in Ophthalmology? Name the appliance which uses this principle. 4+4+2

DEC 2013

56. What are the different effects of keratorefractive surgery? Give short description of each. 10
57. ***Describe in detail complications of blade-based LASIK. Classify them as vision-threatening and non-vision threatening in your description. 5+5
58. Give ideal requirements for setting of eye bank. What are the functions of eye bank? Mention the various medias with their constituents for cornea preservation.
59. ***Give different classifications of chemical injuries of eye with their prognostic significance. Give basic outline in the management of moderate to severe chemical injury in acute and late reparative phase. 5+5

JUN 2014



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60. Describe different types of recurrent corneal erosions. Give an outline of their treatment.
61. *** Describe clinical features, pathology and treatment of vernal conjunctivitis.
62. *** a) What are the commonly used Phakic IOLs?
b) What are their indications?
c) How does one calculate their power and size?
63. ** What is conductive Keratoplasty? What is the mechanism, indications, advantages and disadvantages of conductive keratoplasty?
64. ** Classify corneal dystrophies. Describe the histopathological changes of stromal dystrophies and specific stains used in each.
65. ** a) Classify various ocular lubricating agents used in the management of dry eye disease.
b) What is the role of preservatives used in them?
c) What are the various types of preservatives used in lubricating agents?

DEC 2014

66. *** Enumerate the “stromal corneal dystrophies”, their pathology, clinical features and management. (2+2+2+4)
67. Describe clinical and laboratory diagnosis of trachoma. Discuss its management, complications and prophylaxis. What is SAFE strategy? 4+(2+2+1)+1
68. **** Describe the corneal topography findings in keratoconus. How do you grade the severity of keratoconus? (10)
69. **** Describe the barriers to drug penetration in the cornea. What is partition coefficient? Describe various factors affecting drug penetration with respect to drug formulation and corneal anatomy. (4+2+4)

JUN 2015

70. Causes, clinical features, special investigations and management in a case of Sjogren’s syndrome. (2+2+3+3)
71. *** a) Clinical features and causative organisms of a case of bacterial corneal ulcer.
b) How will you investigate such a case? [(3+2) +5]
72. ** Clinical features, pathogenesis, differential diagnosis and management of a case of viral conjunctivitis. (2+2+2+4)
73. ** Indications, advantages, disadvantages and long term results of Descemet’s stripping endothelial Keratoplasty. (2+3+3+2)
74. ** a) What is pseudophakic bullous keratopathy?
b) Etiopathogenesis, clinical features and management of pseudophakic bullous keratopathy. (1+2+3+4)
75. ** a) Enumerate the various short term and intermediate term methods for corneal preservation.
b) What are their main constituents?
c) Advantages and disadvantages of these media. (4+3+3)



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GLAUCOMA

JUN 2009

1. Medical management of traumatic hyphema. Mention the indications of surgical intervention?
2. Write down the clinical picture and management of congenital glaucoma.
3. Describe modern methods for the diagnosis and management of primary open angle glaucoma.
4. Describe anatomy of angle of anterior chamber of eye.

Dec 2009

5. **Management of traumatic hyphaema with secondary glaucoma.
6. **Anatomy of angle structure with diagram.
7. Describe diode laser cyclophotocoagulation.
8. Disc changes in open angle glaucoma.
9. Management of acute attack of angle closure glaucoma.
10. Principles of Goldmann applanation tonometry.
11. Ahmed glaucoma valve.
12. Pathophysiology of primary angle closure glaucoma.

JUN 2010

13. Physiology of aqueous humor production.
14. Management of a case with florid neovascularisation of the iris, dense cataract, IOP=42 mm hg, visual acuity 3/60 and proliferative diabetic retinopathy.

DEC 2010

15. Write down modern classification of angle closure glaucoma and its relevance.
16. Write down the common post-operative complication of trabeculectomy and how to manage it.
17. **Management of neovascular glaucoma.
18. Give important points while analyzing given visual field for glaucoma and its limitations.

JUN 2011

19. AIGS classification and the management strategy for primary angle closure glaucoma in a systemic manner. 4+6
20. What are the factors related to success or failure of glaucoma filtering surgery. Also give indications of anti-metabolites. 4+4+2
21. ***What is the treatment algorithm for hyphema indicating the role of hospitalization, medical treatment and surgery? 10
22. ***Draw a labeled diagram of the angle structures. Specify the grading by Spaeth's method and RP centre method for gonioscopy. 6+2+2



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DEC 2011

23. Discuss clinical features, pathogenesis and management of normal tension glaucoma. (3+3+4)
24. **Discuss in detail about congenital glaucoma- clinical features and management options. (5+5)
25. **Discuss formation and drainage of Aqueous humour. (10)

JUN 2012

26. **Discuss clinical features, pathogenesis, differential diagnosis and management primary congenital glaucoma.
27. **Discuss aetiopathogenesis, diagnosis and management of acute angle closure glaucoma.
28. ***Discuss the investigations and management of a 55 year old diabetic patient presenting with neovascular glaucoma and cataract with visual acuity 3/60 and IOP of 46 mm of hg.
29. **Discuss the differential diagnosis and management of shallow anterior chamber in first postoperative day after trabeculectomy.
30. Describe the different modalities of measurement of corneal measurement and role of corneal thickness in glaucoma.

DEC 2012

31. **What are artificial drainage shunts? Write briefly about various drainage devices. Give indications and complications of these devices.
32. List the various prostaglandin analogues available in the management of glaucoma. Give their mechanism of action, dose schedule and side effects.
33. **What are the minimum diagnostic criteria for Primary Open Angle Glaucoma (POAG)? Give severity classification of POAG with concept of target pressure?
34. Discuss the causes of unilateral cupping of disc.
35. What is "Reverse pupillary block glaucoma"? Give the clinical appearance, investigations and management of this glaucoma.

JUN 2013

36. **Write about diagnostic features of glaucomatous field defect on automated perimetry (30-2).
10
37. ***What are the minimum criteria for Primary Open Angle Glaucoma (POAG). Give severity classification of POAG with concept of target pressure.
3+7

DEC 2013

38. What is ectopia lentis? Discuss clinical features and complete management of spherophakia and associated problems in a patient with Weill -Marchesani syndrome. 2+8
39. ****Define open angle glaucoma suspect. Discuss the management options and follow up. What are the Global Indices in automated perimetry? 2+4+4
40. ****Draw a diagram of angle of anterior chamber. Discuss the grading and various methods of gonioscopy. 4+3+3



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41. Define LASER. Discuss its effects in ocular tissues and how is it useful in treating glaucomas.
2+ 4+4

JUN 2014

42. *** a) Production, circulation and drainage of aqueous humour.
b) Describe components of blood ocular barrier and its clinical importance.
43. ****Describe various concepts that explain the pathogenesis of glaucomatous ocular damage
44. a) What is Ultrasound biomicroscopy (UBM)? Discuss in brief the principles of UBM.
b) What are its advantages/ disadvantages over anterior segment OCT?
45. Describe the indications, technique and complications of laser peripheral iridoplasty and laser peripheral iridotomy.
46. ****Describe etiopathogenesis, clinical features and treatment of neovascular glaucoma.
47. ***What are glaucoma drainage devices available? What is their mechanism of action? What are the complications following surgery? What is their role in glaucoma management as compared to conventional modulated trabeculectomy?

DEC 2014

48. ***Genetics, Pathophysiology, differential diagnosis and management of primary congenital glaucoma. (2+2+3+3)
49. ****Grading, investigations, complications and management of traumatic hyphema. (2+2+2+4)
50. *****What is advanced glaucoma? Give pathogenesis of glaucomatous ocular damage. How will you follow up a case of advanced glaucoma? What are the various treatment options? (2+2+2+4)
51. What is Sturge-Weber syndrome? Give its classification, clinical signs, investigations and principles of management of associated glaucoma. 2+(2+3+1+2)
52. Define and enumerate the iridocorneal endothelial syndromes (ICE). Describe their salient features and management. (5+5)
53. *****Give various methods of grading of anterior chamber angle. Discuss principle of gonioscopy and various types of gonioscopes. What are the other modalities to see anterior chamber angle? (3+4+3)

JUN 2015

54. Principles, technique, advantages and possible sources of error in performing Goldmann's applanation tonometry. (2+2+3+3)
55. *****Pathogenesis, causes, presentation and management of neovascular glaucoma. (2+2+3+3)
56. a) Define ocular hypertension.
b) Investigations and management of a case of ocular hypertension. [2+ (4+4)]
57. ****Types, indications, advantages and complications of glaucoma drainage devices. (2+2+3+3)



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58. ****Diagnosis and management of a case of shallow anterior chamber on the first postoperative day following trabeculectomy. (5+5)

NEURO-OPHTHALMOLOGY

JUN 2009

1. Describe pathological sequale of right lateral rectus muscle paralysis.
2. Aetiology, clinical picture and management of NAION.

JUN 2010

3. Draw a diagram of visual pathway and show visual defects in craniopharyngioma and occipital lobe lesion.

JUN 2011

4. Causes, differential diagnosis and clinical implications of anisocoria. 3+3+4
5. Draw a labeled diagram of the superior orbital fissure specifying the structures – intraconal and extraconal. Enumerate signs of orbital apex syndrome. 6+2+2
6. **Draw a labeled diagram of the visual pathways indicating the lesions and their causes at different levels. 5+5
7. Draw a labeled diagram of the vascular supply of the optic nerve and its implications for papilloedema and ischaemic optic neuropathy. 6+2+2

DEC 2011

8. **Discuss the vascular supply of optic nerve. Describe fluorescein angiographic details of optic nerve head. Give the relevance of optic nerve head blood supply in AION. (4+3+3)
9. Classify ectropion and describe management of paralytic lagophthalmos. (2+8)
10. Describe clinical features and management of Traumatic Optic-neuropathy. (5+5)
11. ***Draw a labeled diagram of visual pathways and briefly write about the correlation between level of lesion and clinical presentation. (10)

JUN 2012

12. Define scotoma. How do you differentiate between positive and negative scotoma. Discuss the approach to diagnosis in a patient presenting with left hemianopia.
13. **Describe etiology, clinical features, investigations and management of 6th nerve palsy.
14. ***Draw a labelled diagram of pupillary reflex pathway. Discuss approach to diagnosis of anisocoria.
15. Discuss the aetiology, clinical feature, diagnosis and management of optic neuritis in a 40 years old female.

DEC 2012



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16. Define gaze palsy. Discuss various forms of gaze palsy with their localization value.
17. Describe the applied anatomy of oculomotor nerve with the help of a diagram. Give causes of 3rd nerve palsy with treatment outline.

JUN 2013

18. What are the common tumors of optic nerve in adults? Give clinical features to differentiate them clinically and give salient pathologic features of these tumors. 3+2+5
19. What is Homer's syndrome? Discuss clinical features, diagnosis and management of this syndrome. 1+ 3+3+3
20. ****Describe the pupillary pathway of the eye. Write in brief about the lesions light near dissociations and its implications. 5+5

DEC 2013

21. Give clinical presentation, causes, and diagnostic modality and treatment options in benign intracranial hypertension. 2+3+2+3

JUN 2014

22. Describe anatomy and lesions of optic tracts, chiasma and optic radiations.
23. **Describe pathogenesis and pathological features of papilloedema.
24. **Describe sympathetic nerve supply to the eye with the help of a diagram. Describe various pharmacological tests to diagnose the abnormalities of sympathetic system.

DEC 2014

25. What is VEP? What are the types of VEP? What is the role of VEP in modern clinical practice? What are its limitations? (2+2+4+2)
26. ***Anterior ischaemic optic neuropathy: types, clinical manifestations, investigations and management. (2+2+2+4)

JUN 2015

27. a) Signs of optic nerve dysfunction.
b) Various investigations available to assess the optic nerve function. (4+6)
28. a) What are the main types of migraine?
b) Differential diagnosis of the visual phenomena that accompany an attack of migraine. (3+7)

OPTICS & REFRACTION

JUN 2009



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1. How to assess vision in a preschool child.
2. Draw optics of +90D biomicroscopy. How will you calculate the magnifications?
3. What are the pitfalls in autorefraction and how to correct them?

DEC 2009

4. Macular function tests.
5. Principles of direct Ophthalmoscope.
6. Define accommodation and convergences.
7. Describe electroretinography.

JUN 2010

8. Various type of colour vision deficiency.
9. **Various macular function test.
10. **Visual acuity testing in preschool children.
11. Various refractive procedures.
12. Principle, optics and clinical application of Bagolini striated glass.
13. **Mechanism of accommodation and clinical accommodative problems.
14. Describe schematic and reduced eye with help of diagrams.
15. Describe the role of computer in ophthalmology. Enumerate the various methods to enhance visibility for patient with low vision.
16. Describe low and high order aberration and mention the role of wave front analysis in LASIK.

DEC 2010

17. **Principles, pitfalls and procedure of autorefraction.
18. Classify hypermetropia. How will you prescribe glasses in a 20 year old male with hypermetropia.
19. Write various methods of correction of myopia and their advantages and disadvantages.
20. **What is magnification achieved by indirect ophthalmoscopy and 90 D biomicroscopic examination and discuss advantages and indications of both the procedures.
21. **What is ERG? Mention various types of ERG and their uses in ophthalmology.
22. Enumerate various methods of slit lamp examination and describe indications and procedures for specular reflection.
23. What is computer vision syndrome? Describe its causes and management.

JUN 2011

24. Draw the Sturm's conoid indicating the cross sections at different intervals, and the interval of Sturm giving its clinical applications. 4+4+2
25. **Write a short note on color vision indicating the cone pigments, the primary colors, the attributes of color and anomalies of color vision. 2+2+3+3
26. Draw a slit lamp optical section diagram of the crystalline lens showing the different nuclei and zones. Also describe the implications of embryological development of the capsule. 7+3



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27. Describe the types of astigmatism and their management. (5+5)
28. What is Badal's principle? Discuss its relevance to focimetry? (5+5)
29. How will you evaluate visual function in a patient with opaque media? (10)

JUN 2012

30. ***Define range and amplitude of accommodation. Define manifest and latent hypermetropia. What are the different ways to uncover the latent hypermetropia?
31. ***Discuss the techniques for evaluation of visual acuity from birth to 3 years of age.
32. **Discuss the workup of a patient planned for refractive surgery. Give relevance of each investigation. What are the absolute contradictions for laser refractive surgery?
33. ***Give labelled diagram of optics of 90D for retinal examination. Give the advantages and disadvantages of retinal examination with respect to use of 20D lens.
34. Describe the principles of contrast sensitivity (CS). Describe various method of measuring CS testing and its role in various ocular condition.

DEC 2012

35. ****Give various milestones in vision development in a child. Enumerate four important tests for visual activity testing in preverbal children and children between 3-6 years with one merit and demerit of each test.
36. Describe in brief four clinical uses of prisms in ophthalmology. What are Fresnel prisms and mention one important application of these types of prisms? Give principle of induction of prismatic effect through spectacle lens,
37. **Discuss the principles of contrast sensitivity. Give various methods of contrast sensitivity testing and its role in ocular disorders.
38. . **List various aberrations of the eye. What are higher order aberrations and give basic principle of WF related refractive surgery?

JUN 2013

39. ***What are spherical aberrations? How do the spectacle lenses induce these aberrations? What modifications are done to minimize these spectacle induced aberrations? 3+3+4
40. Describe optics of 'Jack in the Box' phenomenon. How can you prevent it? 5+5
41. What is a cross cylinder? Where all is it used during refractions? How can you create a cross cylinder by using lenses from the trial set, please explain giving an example. 2+4+4

DEC 2013

42. **What is Prism? Explain the refraction of light through a prism. What are the uses of prism in ophthalmological practice? 2+4+4
43. ***What is accommodation? Explain its clinical importance with the help of diagram(s). 2+3+5
44. **What is Sturm conoid? Explain its clinical importance with the help of diagram(s). 3+3+4



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45. **a) What is the Principle of Indirect Ophthalmology (IDO)?
b) What are the Various Lenses used for doing IDO and what are their advantages and disadvantages?
c) Describe the Lenses used for viewing the central retina on a slit lamp biomicroscope.
46. ****a) Describe in brief various aberrations of the optical system of the eye.
b) What are the various corrective mechanisms built in the eye to overcome these?

DEC 2014

47.
a. What is Visual Acuity (VA)? (2+2+2+4)
b. How do you measure Visual Acuity in children?
c. What are the shortcomings of testing VA by Snellen's chart?
d. Describe in detail other modalities of VA assessment with their advantages over the use of Snellen's chart?
48. Define Retinoscopy. What are its principles and its types? What inferences are drawn while doing retinoscopy with plain and concave mirrors? (1+3+6)
49. What is Donder's reduced eye? What are the cardinal points? (2+8)
50. ***Describe clinical and therapeutic uses of prisms in ophthalmology. (10)

JUN 2015

51. **Principles, composition, clinical applications and advantages of an ETDRS visual acuity chart. (2+2+3+3)

ORBIT & OCULOPLASTY

JUN 2009

1. Indications, procedures and complications of lateral orbitotomy.
2. Clinical picture and management of congenital epiphora. Indication for surgical intervention.
3. Differential diagnosis of malignant lid tumours.

DEC 2009

4. Clinical features and management of thyroid ophthalmopathy.

JUN 2010

5. Differential diagnosis of proptosis in children.



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DEC 2010

6. Enumerate orbital spaces. Write down 4 common tumors in the central space according to its frequency.

JUN 2011

7. Clinical features, pathological features and treatment of meibomian gland carcinoma. 3+3+4
8. **Grading and management of thyroid related ophthalmology. What is the role of surgery in management? 8+2
9. Indications and methods for frontalis sling surgery in ptosis. 10
10. Describe the bones of the four walls of the orbit. Specify the weak spots. 4+4+2

DEC 2011

11. **Describe clinical manifestations, pathology, differential diagnosis and management of ocular basal cell carcinoma. (2+2+2+4)
12. ***Describe clinical features, investigations, histopathology and management of pleomorphic adenoma of lacrimal gland. (3+2+3+2)
13. Describe causes of failed dacryocystorhinostomy. How will you manage such a case? (4+6)
14. **What are the surgical approaches to orbit? Describe indications, surgical steps and complications of lateral orbitotomy. (2+2+3+3)
15. Describe basic principles and important techniques of lid reconstruction. (3+7)
16. What is pure and impure Blow-out fracture? Describe mechanism, clinical features, investigations and management of Blow-out fracture. (2+3+2+3)
17. Draw a labeled diagram of the vertical section of eye lid. Describe anatomy of levator palpebrae superioris. (4+6)

JUN 2012

18. ***Describe clinical manifestations, pathology, differential diagnosis and management of squamous cell carcinoma.
19. ***Discuss ophthalmic manifestation of thyrotoxicosis.
20. Give differential diagnosis of painless progressive proptosis in a 35 year old man. Describe clinical features, histopathology and management of cavernous haemangioma.
21. Describe relevant nasal anatomy in relation to endonasal DCR. Give advantages and disadvantages of endonasal DCR versus external DCR.
22. **Describe clinical features, investigations and management of a case of medial wall fracture of orbit.
23. Draw a labelled diagram of cut section of lid in relation to involitional ectropion. .Describe etiopathogenesis, clinical features, diagnosis and surgical management of involitional ectropion.
24. Draw cross section labelled diagram of lacrimal sac showing relationship of orbicularis oculi muscle to sac. Discuss lacrimal pump.
25. Draw cross section labelled diagram of cavernous sinus. Describe clinical features of cavernous sinus thrombosis.



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26. Discuss the pre-operative assessment of entropion. Briefly discuss the surgical options for the correction of involutional entropion.
27. ***Discuss briefly various approaches in orbital surgery with specific indications in each approach. Enumerate four important complications of orbital surgery.
28. **What are the surgical spaces of the orbit? Compare and contrast ultrasonography Vs CT scan for orbital disease.

JUN 2013

29. ****Discuss clinical features, differential diagnosis and management of lid tumor. 3+3+4
30. **What are the clinical features of blow out fracture? Discuss its investigation and management. 2+2+6
31. **Describe the anatomy of cavernous sinus. Name all the structures piercing through it. 5+5

DEC 2013

32. Describe in detail diagnosis and management of idiopathic orbital inflammatory disease. 10
33. **Describe the mechanism, causes, presentation and management of senile ectropion. 2+2+ 2+ 4
34. What is congenial ptosis? Describe the evaluation of ptosis and the management of congenial ptosis.

JUN 2014

35. ***a) Orbital Spaces and their applied importance
b) Superior Orbital Fissure: Anatomy and associated clinical features.
36. Classify chronic blepharitis. Describe its clinical features, etiology and treatment.
37. Describe the causes, types, investigation and management of a case of unilateral axial proptosis.
38. Describe clinical features and principles of management of Blepharophimosis Syndrome
39. **Describe the etiology, clinical features, differential diagnosis and Management of congenial nasolacrimal duct obstruction.

DEC 2014

40. **Draw labelled diagram(s) depicting walls of the orbit. Describe in detail the medial wall of the orbit. Describe the applied anatomy of the optic canal. (3+3+4)
41. **Preoperative assessment of a case of entropion and discuss 3 surgical options of correction of involutional entropion. (3+7)
42. **What is physiological lacrimal pump? Describe clinical evaluation in a case epiphora. (2+8)
43. *****Describe the clinical features and management of lacrimal gland tumor. (5+5)

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44. **Pathogenesis, diagnosis, differential diagnosis and management of chronic blepharitis. (2+2+2+4)
45. Acquired causes and management of an anophthalmic socket. (4+6)
46. ***a) Clinical presentation of a case of orbital blowout fracture.
b) How will you investigate such a case?
c) Indications for surgery and the surgical principles. (3+2+5)
47. Causes and management of a case of acquired ptosis. (5+5)
48. a) What is a dermoid cyst?
b) Systemic associations of dermoid cyst.
c) Differential diagnosis of epibulbar swellings. (2+4+4)

PEDIATRIC OPHTHALMOLOGY & STRABISMUS

JUN 2009

1. Classification and management of primary divergent squint.

DEC 2009

2. Management of unilateral congenital cataract in a 3 year child.
3. Management of accommodative esotropia.

JUN 2010

4. **Management of unilateral congenital cataract.
5. **Management of exodeviation.

DEC 2010

6. Give indications for referring a patient of juvenile diabetes mellitus for ophthalmic check up.
7. ***Give classification, clinical work up and management of primary exodeviation.
8. ***Management of unilateral congenital cataract in a 3 year old child and its post-operative rehabilitation.
9. How do you define A and V pattern in strabismus? How you will diagnose it and what is its clinical significance?

JUN 2011

10. Differential diagnosis of watering eye in the first week of life. List three common causes of ophthalmia neonatorum indicating the time of onset and two characteristics of each. Name the prophylactic agent. 3+(2×3)+1
11. Describe the principles of management of accommodation anomalies by surgery. 10
12. Definition, causes, pathogenesis and classification of amblyopia 1+3+3+3



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13. **What are the features and differential diagnosis of infantile esotropia? When it should be operated and its prognosis for binocular single vision (BSV)? 5+5

DEC 2011

14. What is binocular vision? What are the grades of binocular vision and mention a few important tests for stereopsis? (2+4+4)
15. Describe muscle transplantation procedures in strabismus. (10)

JUN 2012

16. What is suppression in relation to strabismus? Discuss diagnosis and management of strategies of suppression.
17. ****Describe the intraoperative and post-operative management of a unilateral congenital cataract in a 2 years child.

DEC 2012

18. What is microtropia? Discuss the types and clinical features of microtropia.
19. ***Describe the clinical features and management of partially accommodative esotropia.

JUN 2013

20. **Describe AV pattern deviations. Discuss etiology, Clinical features and management of these deviations. 2+2+3+3
21. *****Give Indications of surgery for pediatric cataract. Outline complete management and specific surgical challenges in a 2 year old child with unilateral cataract. 3+3+4
22. ****Describe the clinical features and management of intermittent divergent squint. 3+7
23. **What is amblyopia? Explain the concept of critical period in development of vision. Outline the principles of treating strabismus amblyopia. 4+3+3

DEC 2013

24. ****Define essential infantile esotropia? Give at least four differential diagnosis of essential infantile esotropia and give at least two differentiating features among them. 2+8
25. Describe Faden's operation as applied in management of strabismus. 10
26. A two year old child presents with cataract both eyes. Discuss the possible causative factors and its management.

JUN 2014

27. Classify congenital cranial dysinnervation disorders (CCDDs). Describe Duane's retraction syndrome and its management.
28. *****Describe the Clinical Features, investigations, indications and surgical management of infantile esotropia, and its post-operative complications.

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- 29.
- Anatomy of the superior oblique muscle. (2+2+6)
 - Mechanism of its muscle actions in various directions of gaze.
 - Management of unilateral and bilateral superior oblique palsy.
- 30.
- *****Difference between an adult and paediatric eye. (3+4+2+1)
 - Precautions to be observed in doing paediatric cataract surgery and why?
 - What is the relationship between paediatric cataract surgery and glaucoma?
 - Outline complete management of unilateral congenital cataract.
31. *****Classify and give complete management of esotropias in detail. (3+7)

JUN 2015

32. a) Difference between a Horopter and Panum's area.
b) Sensory and motor adaptations to strabismus. [4+(3+3)]
33. *****a) Define and classify esotropia.
b) Management of a 6 year old patient with esotropia. [(2+2) +6]
34. **a) What is Duane's Retraction Syndrome?
b) Enumerate the types and describe the clinical features.
c) Management of a case of Duane's Retraction Syndrome with abnormal head posture. [1+ (2+3) +4]

VITREO-RETINA/UVEA

JUN 2009

- Investigations, etiology and management of a case of necrotizing scleritis.
- Describe MARINA & FOCUS Trials in the management of Wet ARMD.
- Write down management and complications of ischaemic central retinal vein occlusion.
- Describe clinical picture, management and sequel of sarcoid uveitis.
- Screening of a case of retinopathy of prematurity.
- Factors influencing sclerotomy, sites for vitrectomy.
- Write short note on Fuch's heterochromic cyclitis.
- Clinical Picture of hereditary macular degeneration and its mode of inheritance.
- Role of glycosylated Hb, blood pressure and blood cholesterol in prevention and management of diabetic retinopathy.
- Anatomical and functional prognostic factors in management of rhegmatogenous retinal detachment.
- Indications, complications of intravitreal steroids.
- Genetics and inheritance of retinoblastoma.



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13. Discuss in detail how to collect vitreous sample for microbiological studies in endophthalmitis.
14. What are biological immunosuppressive. Name few of them, as used in management of uveitis.
15. **Intraocular drug implants – principal, types, uses, disadvantages.
16. Describe normal attachment of vitreous.

Dec 2009

17. **Ocular manifestations of sarcoidosis.
18. Pathology of retinoblastoma
19. Describe features of Hypertensive Retinopathy.
20. Management of diffuse diabetic macular edema with visual acuity less than 6/60 in both eyes.
21. **Management of bacterial endophthalmitis.
22. **Principles of RD buckling surgery.
23. Management of acute anterior uveitis.
24. Intraocular tamponade used in vitreoretinal surgery.
25. Management of retinopathy of prematurity.
26. Management of branch retinal vein occlusion.
27. Draw diagram (s) depicting the anatomy of retina.

JUN 2010

28. **Pathology of retinoblastoma.
29. ***Approach to a patient who presented with sudden decrease in vision associated with pain and redness after phacoemulsification.
30. Various vitreoretinal procedures.
31. Management of a case of pulmonary tuberculosis who developed sudden decrease of vision after one month of starting antitubercular therapy.
32. Method of assessment of macular thickness.
33. **Hypertensive retinopathy.
34. ***Management of rhegmatogenous retinal detachment.
35. ***Retinopathy of prematurity.
36. ***Intravitreal injection.
37. Anterior chamber associated immune device (ACAID) - definition, mechanism and its useful effect.

DEC 2010

38. ***Write down modern histopathology classification of Retinoblastoma and give its clinical significance and effect on management.
39. Write down posterior segment complication of blunt trauma which can affect vision.
40. Write down modern management of posterior segment intraocular cysticercosis.



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41. ****Name few intraocular steroid implants approved by FDA and mention its indications, contraindications and side effects.
42. Classify diabetic macular edema and methods to classify it and its clinical relevance.
43. Do's and don'ts in management of posterior dislocation of nucleus in phaco surgery.
44. Write down the advantages and disadvantages of various methods of retinopexy like laser and cryopexy. Write down how you are going to do.
45. **Clinical signs and management of branch vein occlusions.
46. Indications and contraindications of Intravitreal Avastin in PDR.
47. **Write down prevalence of various forms of retinoblastoma. How will you counsel a parent with one child having a retinoblastoma?
48. Enumerate various methods of slit lamp examination and describe indications and procedures for specular reflection.
49. Describe signs and symptoms, management of pars planitis.
50. **Various immunosuppressive used in resistant cases of posterior uveitis.

JUN 2011

51. Immuno-pathological profile of non-granulomatous uveitis. 10
52. **Classification and brief clinicopathological profile of scleritis. 4+6
53. Classify diabetic retinopathy giving features of each category and outline of management. 5+5
54. Types of retinal artery obstructions and its causes and management. 5+5
55. ****What are the common organisms causing endophthalmitis after cataract? Describe the principles of treatment. 5+5
56. Describe the predisposing peripheral retinal degenerations for retinal detachment and give indications and methods of prophylaxis. 5+5
57. Causes, pathogenesis and principles of management of choroidal neovascular membrane (CNVM). 3+3+4
58. Name the common syndromes that masquerade as anterior and posterior uveitis and their diagnostic tests. 5+5
59. ****How is retinopathy of prematurity classified indicating the indications & principles for therapy? 10
60. ***Advantages and disadvantages of scleral buckling surgery versus pars plana vitrectomy for RD. 5+5
61. **Describe the common causes of leukocoria. What is retinoblastoma gene and inheritance? 8+2

DEC 2011

62. Describe etiology, clinical features and management of Eales disease. (2+4+4)
63. **Discuss etiology, clinical features and management strategies for diabetic macular edema (3+3+4)



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64. Write about clinical presentation, investigations, histopathology and management of choroidal melanoma. (2+3+2+3)
65. 1. Discuss in detail about Vogt-Koyanagi Harada syndrome. (10)
66. ***Discuss differential diagnosis of Leukocoria. (10)
67. Discuss toxoplasmosis. (10)
68. ****Describe staging, risk factors and outline management principles of retinopathy of prematurity. (4+2+4)
69. How do you classify giant retinal breaks? Describe its etiology, pre-operative evaluation and principles of management. (2+2+2+4)
70. Describe anatomy of macula of retina. Support your answer with suitable diagrams. (10)
71. **Discuss anatomy and physiology of vitreous. Write a brief note on etiopathogenesis of posterior vitreous detachment. (4+4+2)

JUN 2012

72. **Describe clinical features, etiology, investigations and various modalities of management in branch retinal vein occlusion.
73. Discuss clinical features, investigations, sequelae and management of intraocular metallic foreign body.
74. Discuss clinical features, diagnosis, complications and management of uveitis associated with juvenile rheumatoid arthritis.
75. ***Classify scleritis. Discuss clinical manifestations, investigations and management of scleritis and its complications.
76. **Write in brief on ocular involvement in ocular Cysticercosis and briefly outline the management of ocular cysticercosis.
77. **Discuss role of silicone oil and expandable gases in the management of retinal detachment.
78. Discuss the immediate management of a 60 year old diabetic patient who has collapsed after injection of dye during FFA.
79. **Discuss the anatomy of macula. Enumerate relevant points of difference of retinal anatomy at macula and peripheral retina.

DEC 2012

80. Describe briefly anatomy of choroid. Discuss the developmental basis of choroidal coloboma. Classify types of choroidal colobomas.
81. ****Enumerate the routes of drug delivery in eye. Mention four commonly used intravitreal drugs with their dosages and indications.
82. Discuss endophthalmitis-vitreotomy study with respect to aim, design and outcomes.
83. **Discuss pathogenesis, clinical features, diagnosis, differential diagnosis and management of intermediate uveitis.
84. ***Define clinically significant macular edema, high risk PDR and management of these conditions.
85. Write the causes, clinical features, diagnosis and surgical management of macular holes.



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86. **Describe the clinical features and clinicopathologic correlation of age related macular degeneration (ARMD). Describe the role of various modalities in the management of ARMD.
87. *****Describe the clinical characteristics and staging of retinopathy of prematurity (ROP). Write the criteria for its screening with management principles.
88. ****Give the international classification of retinoblastoma. Discuss the management of retinoblastoma with recent advances in detail.
89. Discuss clinical features and diagnostic tests to differentiate between retinoschisis and retinal detachment.

JUN 2013

90. **Discuss all the possible ocular injuries with a cricket ball to the eye in 20 year old male. Give management of traumatic retinal disorders. 5+5
91. ****Discuss clinical features, classification, investigations and management of diabetic macular edema. 3+2+2+3
92. Discuss in detail the ocular manifestations of AIDS. 10
93. *****Discuss clinical features, differential diagnosis and management of metastatic endophthalmitis in a 15 year old boy. 4+3+3
94. ***Discuss clinical features, diagnosis and management of intraocular and extraocular cysticercosis 3+3+ 4
95. **Write clinical features and management of retinal detachment with giant retinal tear in a 22 year Old boy with Marfan's Syndrome 3+7
96. *****How you will diagnose diabetic macular edema? Discuss its investigation and management. 2+3+5
97. **What are the various clinical feature and complications of acute attack of an acute uveitis? Discuss its management. 2+3+5
98. **Discuss pathophysiology and management of ocular toxoplasmosis. 7 + 3

DEC 2013

99. What is the principle of Optical Coherence Tomography? What are the types of OCTs available? What are the diagnostic and therapeutic issues of OCT in management of macular pathology? 2+2+ (3+3)
100. What are the 3 landmark studies in establishing management protocols in Diabetic retinopathy? What are the conclusions of each of them? 1+ (3+3+3)
101. Write the ocular manifestations, systemic associations and management of Behçet's disease including recent drugs available for treatment. 3+1+6
102. **What are the common causes of anterior uveitis in children? What are the common clinical presentations and management of Juvenile Spondyloarthritis? 4+(4+2)
103. Describe the pathology of "malignant melanoma of choroid". How does the pathology influence the prognosis? 10
104. *****Describe in details management of diabetic maculopathy. 10



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105. Discuss the molecular genetics, clinical features, tests of visual functions in typical Retinitis Pigmentosa. 2+4+4
106. **What is the difference between retinoschisis and retinal detachment? Discuss the various types of retinoschisis and its management. 3+(4+3)
107. **Discuss the management of metallic intraocular foreign body. What are the ophthalmological effects if it is not removed? 5+5
108. What are different classifications of uveitis? Discuss briefly about the granulomatous uveitis and its management. 3+(3+4)
109. ***What is the role of intraocular corticosteroids in retinal vein occlusions? Discuss the findings of SCORE and Posurdex trial in venous occlusions. 4+(3+3)
110. *****What is endophthalmitis? What are the precautions to be taken to prevent post-operative endophthalmitis? 2+8

JUN 2014

111. a) Describe in brief the embryological evolution of retina?
b) What are the differences between rods and cones?
c) What is the importance of IS/OS junctions?
112. a) What is Terson's Syndrome?
b) What are its Clinical Features?
c) Discuss its differential diagnosis.
d) Describe the complications and their management
113. ***a) What are the various types of anti-VEGF agents available?
b) What are their pharmacological features?
c) What is their role in retinal disorders?
d) What are their complications and Limitations?
114. Describe clinical features. Treatment and prognosis in case of Cytomegalovirus Retinitis.
115. a) Enumerate the differential diagnosis of a pigmented iris lesion.
b) Write a short note on histopathology of choroidal melanoma.
116. *****Discuss the differential diagnosis of retinoblastoma. Discuss the factors which affect the genetic counseling for patients of retinoblastoma.

DEC 2014

117. ****Techniques, role, indications and advantages or disadvantages of periocular and intraocular steroids. (2+2+2+4)
118.
a. *****Discuss the microbiological profile in infective endophthalmitis with their antibiotic sensitivity profile. (3+3+4)
b. Give doses and combinations of preferred intravitreal antibiotics.
c. What is the normal ocular flora?
119. ***Pathology of dry and wet age related macular degeneration. (5+5)
120. Describe the causes, investigations and management in a case of "tractional retinal detachment". (3+3+4)



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121. A 21 year old myope (-2.5D) presented with sudden profound unilateral diminution of vision. Discuss the differential diagnosis, investigation and management.
122. *****Discuss the role of Lasers in diabetic macular edema. Outline complete plan of management in severe diabetic macular edema. What is the role of newer Lasers in management of diabetic macular edema? (5+2+3)
123. *****Discuss the CATT trial. What were the objectives, design, conclusions and implications of the trial in respect of anti-VEGF agents? 2+(2+2+2+2)

JUN 2015

124. *** a) Anatomy and development of the macula.
b) Different zones of macula and their clinical importance.
c) Enumerate the macular function tests. [4+(2+2)+2]
125. **Pathology, different diagnosis, adverse prognostic factors and non-surgical management of a case of choroidal melanoma. (2+2+2+4)
126. ***a) Clinical features and types of anterior and posterior scleritis.
b) How will you investigate a case of scleritis?
c) Management of necrotizing scleritis. (4+4+2)
127. ***Differential diagnosis and management of a 10 year old boy presenting with bilateral diminution of vision and swelling of the right knee. (5+5)
128. *****a) Investigations and assessment of a case of long standing diabetes with moderate nonproliferative diabetic retinopathy with clinically significant macular edema.
b) How will you manage such a case? (4+6)
129. Investigations, diagnosis and management of a 40 year old male patient presenting with unilateral central scotoma. (3+3+4)
130. *****a) Indications, routes of administration, dosage schedule and complication of steroids in uveitis.
b) Role of alternative drugs used in uveitis. [(2+2+2)+2]
131. Presentation, systemic features, investigations and treatment of primary intraocular lymphoma. (2+2+3+3)
132. Clinical features, differential diagnosis and management of a case of Coat's disease. (2+4+4)
133. Indications, advantages and disadvantages of internal limiting membrane (ILM) peeling in vitreoretinal surgery. (2+4+4)
134. a) Principles, role and uses of ERG.
b) Multifocal ERG and its importance. [(2+3+3)+2]
135. ***a) Posterior segment complications in a case of blunt trauma to the eye.
b) How will you manage them? (5+5)
136. a) What is an epiretinal membrane (ERM)?
b) **Causes of ERM and their management. [2+(4+4)]
137. **a) Differential diagnosis of heterochromia iridis.
b) Features, complications and management of a case of Fuch's Uveitis Syndrome. (2+8)