

Sikkim Public Service Commission

Main Written Examination for the Post of Optometrist under Sikkim State Subordinate Allied and Healthcare Service

PAPER -II

Time allowed: 3.00 Hrs

Maximum Marks: 200

INSTRUCTIONS TO CANDIDATES

Read the instructions carefully before answering the questions: -

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Use only Black Ball Point Pen to fill the OMR Sheet.
3. Do not write anything else on the OMR Answer Sheet except the required information.
4. This Test Booklet contains 50 questions in MCQ Mode in Part I to be marked in OMR Sheet. Part II and Part III are Subjective Questions which have to be written on separate answer sheet provided to you.
5. Before you proceed to mark in the Answer Sheet (OMR), you have to fill in some particulars in the Answer Sheet (OMR) as per given instructions.
6. After you have completed filling in all your responses on the Answer Sheet (OMR) and the examination has concluded, you should hand over the Answer Sheet (OMR) and separate answer sheet to the Invigilator only. You are permitted to take with you the Test Booklet.
7. **Marking Scheme**

THERE WILL BE NEGATIVE MARKING FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS

- i. There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, one-third of the marks assigned to the question will be deducted as penalty.
- ii. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct and there will be same penalty as above to the question.
- iii. If a question is left blank. i.e., no answer is given by the candidate, there will be no penalty for that question.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

PART -I

Choose the correct answer for the following questions:

(1x50=50)

1. **Vertical prism test measures**
 - A. Tropia
 - B. Phoria
 - C. Fixation preference
 - D. DVD

2. **The first person to suggest and apply a contact lens to the eye was**
 - A. Leonardo Da Vince
 - B. Rene Descartes
 - C. Sir John FW Herschel
 - D. FA Muller

3. **What is the power of the contact lens of a -10.00 DS myope wearing his habitual glasses at a distance of 10 mm from the corneal plane?**
 - A. -11.00 DS
 - B. -10.00 DS
 - C. -9.00 DS
 - D. -8.00 DS

4. **Calculate ED of given frame has the dimensions A size = 50 mm C size = 49 mm DBL = 17 mm with frame difference of zero**
 - A. 49 mm
 - B. 50mm
 - C. 52 mm
 - D. 54 mm

5. **Which of the following contact lens material has the highest DK value**
 - A. PMMA
 - B. Fluroperm 90
 - C. Optimum extra
 - D. Boston XO2

6. **Frequency of sound wave used in a scan biometry**
 - A. 10 MHz
 - B. 50 MHz
 - C. 100 MHz
 - D. 200 MHz

7. **Which formula would you use for post Lasik myopic eyes?**
 - A. Hoffer Q
 - B. SRK II
 - C. SRK T
 - D. Haigis L

8. Which medium is used to store cornea in eye banks?

- A. McCarey Kaufman media
- B. BSS
- C. Normal saline
- D. RPMI 1640

9. Pentacam topography is based on _____

- A. Scheimpflug imaging
- B. Placido disc
- C. Laser interferometry
- D. Ray Tracing

10. Adult size of the cornea is attained by the age of

- A. 2 years
- B. 3 years
- C. 5 years
- D. 9 years

11. Power of the reduced eye is

- A. 30 D
- B. 45 D
- C. 60 D
- D. 68 D

12. Magnification of direct ophthalmoscopy

- A. 10x
- B. 3x
- C. 15x
- D. 20x

13. Which continues to grow in life time

- A. Cornea
- B. Lens
- C. Iris
- D. Retina

14. Limbal dermoid seen in

- A. Goldenhar syndrome
- B. Sturge-Weber syndrome
- C. Marfan's syndrome
- D. Steven Johnson's syndrome

15. In deuteranopia there is defect of

- A. Red color
- B. Green color
- C. Blue color
- D. All

16. How will check the potential visual acuity

- A. Pin hole
- B. Stenopic slit
- C. Visual field
- D. OCT

17. Night blindness is due to

- A. Vitamin A deficiency
- B. Vitamin B12
- C. Omega fatty acids
- D. All of the above

18. Goldmen applanation tonometer is calibrated at which corneal thickness?

- A. 480 microns
- B. 500 microns
- C. 520 microns
- D. 560 microns

19. Phacomorphic glaucoma is an example of

- A. Primary open angle glaucoma
- B. Secondary open angle glaucoma
- C. Primary angle closure glaucoma
- D. Secondary angle closure glaucoma

20. Example of mixed astigmatism

- A. +1.00 DS /-0.75 DC x 90
- B. +1.25 DS /-1.25 DC x 180
- C. +1.00 DS / -2.00 DC x 90
- D. +1.00 DS/ -1.00 DC x180

21. Most sensitive part of retina

- A. Optic disc
- B. Fovea centralis
- C. Macula lutea
- D. Peripheral retina

22. Contact lens with highest water content

- A. Bio true one day
- B. SofLens daily
- C. Frequency torics
- D. Avaira vitality

23. Refractive index of cornea

- A. 1.376
- B. 1.386
- C. 1.406
- D. 1.333

24. Focimeter measures

- A. Front vertex power
- B. Back vertex power
- C. Base curve
- D. Effective power

25. Orientation of prisms in Bausch and Lomb Keratometer

- A. Base up and base down
- B. Base up and base out
- C. Base down and base in
- D. Base down and base down

26. Power of standard lens in lens meter

- A. +20D
- B. -20 D
- C. +10D
- D. +30D

27. Spherical equivalent of +22.00 DS/-1.00 DC x180

- A. +21.00 DS
- B. +22.00 DS
- C. +23.00 DS
- D. +24.00 DS

28. You fit a toric soft contact lens on a patient with a refractive error of - 2.50 D/ -1.00 x 180. The trial lens centers well, but the lens mark at the 6 o'clock position appears to rest at the 7 o'clock position when the lens is placed on the patient's eye. What power contact lens should you order?

- A. -2.50 D - 1.00 X 180
- B. -2.50 D - 1.00x 150
- C. -2.50 D - 1.00 X 30
- D. -2.50 D - 1.00 x 90

29. Kappa angle is the angle between:

- A. Visual axis and optical axis
- B. Papillary axis and optical axis
- C. Optical axis and fixation point at the center of rotation of the eye ball
- D. Visual axis and pupillary axis

30. Duo chrome test is based on

- A. Spherical aberrations
- B. Coma
- C. Chromatic aberrations
- D. Astigmatism

31. Posterior polar cataract best seen in

- A. Sclerotic scatter
- B. Direct illumination
- C. Retro illumination
- D. Diffuse illumination

32. Which ray will bend most while passing through prism?

- A. Red
- B. Yellow
- C. Green
- D. Blue

33. Refractive index of tear film

- A. 1.3375
- B. 1.385
- C. 1.295
- D. 1.450

34. Ptosis and mydriasis seen in

- A. Facial palsy
- B. Peripheral neuritis
- C. Oculomotor palsy
- D. Sympathetic palsy

35. Schirmer's test is used to diagnose

- A. Dry eye
- B. Infective keratitis
- C. Horner's syndrome
- D. Ptosis

36. Koeppe's nodules are found in

- A. Cornea
- B. Sclera
- C. Iris
- D. Conjunctiva

37. Which laser is used for capsulotomy?

- A. Diode laser
- B. Carbon dioxide laser
- C. Excimer laser
- D. ND Yag laser

38. Homonymous hemianopia is due to

- A. Optic tract
- B. Optic nerve
- C. Optic chiasma
- D. Occipital cortex

39. In concomitant squint

- A. Primary deviation • secondary deviation
- B. Primary deviation • secondary deviation
- C. Primary deviation = secondary deviation
- D. None of the above

40. The best treatment of amblyopia is

- A. Orthoptic exercise
- B. Occlusion
- C. Surgery
- D. Best treat after 10 years

41. Specular microscopy reveals a patient's cornea to have 60% non-hexagonal endothelial cells. Which 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

42. V pattern strabismus is most likely to be associated

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

43. Example of Jackson cross cylinder

- A. -0.50 DS / + 1.00 DC x 180
- B. -0.50 DS / + 0.50 DC x 180
- C. -1.00 DS / +0.50 DC x 180
- D. -0.25 DS / +0.25 DC x 180

44. Scissor's reflex is seen in

- A. Keratoconus
- B. Cataract
- C. Myopia
- D. Hypermetropia

45. Near point of focus in myopic patient lies

- A. In front of eye
- B. Behind the retina
- C. Infinity
- D. None of the above

46. Hypermetropia which can be overcome by accommodation is:

- A. Manifest
- B. Latent
- C. Facultative
- D. Absolute

47. What is the power of a prism that displaces an image 10 cm at a distance of 50 cm?

- A. 10 Δ
- B. 20 Δ
- C. 25 Δ
- D. 40 Δ

48. Visual acuity of 6/6 mts corresponds to Log MAR value of

- A. 1.0
- B. 0
- C. 1.5
- D. 2

49. The process of reshaping the cornea and thus reducing myopia by wearing hard contact lens designed to flatten the central cornea for a period of time after the lens removal called as

- A. Orthokeratology
- B. Radial keratotomy
- C. PRK
- D. Epi Lasik

50. If Q value of conicoid is zero. Determine the shape

- A. Hyperboloid
- B. Paraboloid
- C. Ellipsoid
- D. Sphere

PART – II

Write short notes on ANY FOUR of the following:

(5x4=20)

1. Geneva lens measure
2. Duo chrome test
3. Computer vision syndrome
4. Jackson cross cylinder
5. Maddox wing
6. Describe layers of cornea

PART – III

Attempt ANY TWO from the following:

(15x2=30)

1. Write about functions of tear film. Different layers of tear film and their chemical compositions, also describe about tear film abnormalities.
2. Write about different Lasers used in ophthalmology. How will you work up a Lasik patient?
3. Write about Diabetic Retinopathy and its different stages. Also discuss about treatment options.
4. Write about subject refraction and different techniques used in refinement.