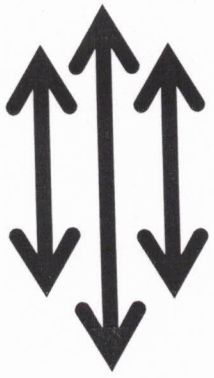
नेपाली सेना

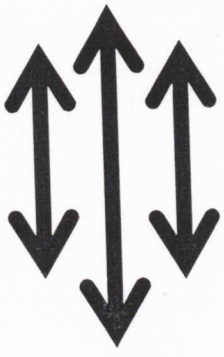
श्री भर्ना छनौट निर्देशनालय, कार्यरथी विभाग,

जंगी अड्डा



प्रा.उ.से Ophthalmic (आन्तरिक) पदको

लिखित परीक्षाको पाठ्यक्रम



२०७९

प्रा.उ.से Ophthalmic (आन्तरिक) पदको लिखित परीक्षाको पाठ्यक्रम

समय:- ४ घण्टा १५ मिनेट

पूर्णाङ्क:-१५०
उत्तीर्णाङ्क:- ६०

यो पाठ्यक्रम नेपाली सेनाको प्रा. उ.से. Ophthalmic (आन्तरिक) पदको उम्मेदवार छनौट परीक्षाको लागि निर्धारण गरिएको हो । लिखित परीक्षामा सरिक हुने उम्मेदवारहरुको पेशा सम्बन्धी बिषयलाई आधार मानी प्रश्नहरु सोधिने छ ।

(क) लिखित परीक्षाको माध्यम नेपाली/अंग्रेजी वा दुवै भाषा हुनेछ ।

(ख) लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र अर्को चरणको परीक्षामा सम्मिलित गराईने छ ।

(ग) प्रश्नपत्र निर्माण गर्दा पाठ्यक्रममा समावेश भएका सबै विषयहरुलाई यथासंभव समेटिनेछ ।

(घ) बस्तुगत र विषयगत संयुक्त रुपमा पूर्णाङ्क र उत्तीर्णाङ्क कायम गरिनेछ ।

(ङ) बस्तुगत र विषयगत परीक्षाको पाठ्यक्रम एउटै हुनेछ ।

(च) बस्तुगत र विषयगत लिखित परीक्षा एकैपटक वा छुट्टाछुट्टै गरी लिन सकिनेछ ।

(छ) यो पाठ्यक्रम मिति २०७९/०९/१५ गतेबाट लागू हुनेछ ।

लिखित परीक्षाको योजना र पाठ्यक्रम

विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्न संख्या X अङ्क	समय
पेशा सम्बन्धि	७५	६०	बस्तुगत (Objective)	बहुवैकल्पिक प्रश्न (MCQs)	७५ प्रश्न X १ अङ्क = ७५	१ घण्टा १५ मिनेट
	७५		विषयगत (Subjective)	छोटो उत्तर	९ प्रश्न X ५ अङ्क = ४५	३ घण्टा
				लामो उत्तर	३ प्रश्न X १० अङ्क = ३०	

लिखित परीक्षा को पाठ्यक्रम

1. Anatomy and Physiology of eye:

1.1 Eyelids parts and layers
1.2 Corneal layers and its transparency
1.3 Sclera and its function
1.4 Lens and its embryological development
1.5 Aqueous humor dynamics
1.6 Components in vitreous humor
1.7 Retinal layers and its function
1.8 Visual pathway
1.9 Pupillary reflexes

2. Disease of eye:

2.1 Disease of eyelids
2.2 Disease of cornea
2.3 Disease of sclera
2.4 Uveitis
2.5 Glaucoma
2.6 Cataract
2.7 Disease of Vitreous humour
2.8 Disease of retina
2.9 Abnormalities in visual pathway and pupillary reflexes

3. Physiology of vision:

3.1 Photochemical and electrical reaction in retina
3.2 Function of Rods and Cone in visual sensation
3.3 Visual pathway
3.4 Visual cortex

4. Physical and geometrical optics:

4.1 Light and electromagnetic radiation
4.2 Reflection of light
4.3 Refraction of light
4.4 Diffraction of light
4.5 Interference and polarization of light
4.6 Types of mirror
4.7 Types of lenses

5. Color vision:

5.1 Trichromatic theory of color vision

5.2 Types of color vision defect
5.3 Tests for color vision
5.4 Professional application of color vision

6. Refraction Procedure in optometry:

6.1 Types of Retinoscopy
6.2 Keratometry
6.3 Stenopic slit
6.4 Pinhole test
6.5 Subjective refraction
6.6 Jackson cross cylinder
6.7 Accommodation
6.8 Far point and near point in eye

7. Ophthalmoscope and its types:

7.1 Distant direct ophthalmoscopy
7.2 Direct ophthalmoscopy
7.3 Indirect ophthalmoscopy

8. Slit lamp Biomicroscope:

8.1 Types of Observation system
8.2 Parts of Slit lamp Biomicroscope
8.3 Uses of specular reflection
8.4 Slit lamp for applanation
8.5 Slit lamp for Fundus examination
8.6 Slit lamp for Gonioscopy

9. General investigation and procedures:

9.1 Types of Tonometry
9.2 Perimetry
9.3 Incision and drainage/incision and curettage
9.4 Syringing
9.5 Pre-op evaluation of cataract

10. Special investigations:

10.1 Optical coherence tomography
10.2 Contrast sensitivity test
10.3 Fundus fluorescein angiography
10.4 Biometry

11. Pediatric optometry:

11.1 Visual developmental milestone
11.2 Emmetropization
11.3 Visual acuity techniques and instruments used in children

11.4 Accommodative and convergence insufficiency in children
11.5 Amblyopia management in children
11.6 Congenital cataract and its optometric management
11.7 Congenital esotropia/exotropia and its management
11.8 Spectacle dispensing in children
11.9 Guideline for prescribing spectacles

12. Geriatric optometry:

12.1 Senile miosis
12.2 Senile cataract and management
12.3 Depth of focus in old age
12.4 Visual acuity in old age
12.5 Age related macular degeneration
12.6 Spectacle dispensing in geriatric group

13. Community optometry:

13.1 Avoidable blindness
13.2 Preventable blindness
13.3 Curable blindness
13.4 Data of low vision and blindness in Nepal and global level
13.5 Different types of projects and tasks working on blindness
13.6 Trachoma and its management on community level
13.7 Refractive error and visual impairment

14. Systemic diseases and eye:

14.1 Hypertensive retinopathy
14.2 Diabetic retinopathy

15. Stereopsis:

15.1 Definition
15.2 Stages of stereopsis
15.3 Tests of stereopsis
15.4 Application of stereopsis

16. Strabismus:

16.1 Definition
16.2 Types of strabismus
16.3 Qualitative and quantitative measurement of strabismus
16.4 Cover/Uncover test
16.5 Synoptophore
16.6 Paralytic strabismus

17. Orthoptic evaluation:

17.1 Lens flipper/Prism flipper

17.2 Synoptophore test
17.3 Prism bar
17.4 RAF ruler

18. Vitamins and its deficiency in eye:

18.1 Vitamin A and its deficiency in eye
18.2 Vitamin D
18.3 Vitamin C

19. Contact lens practice in optometry:

19.1 Soft and hard contact lens materials
19.2 Soft contact lens fitting
19.3 RGP contact lens fitting
19.4 Indication and contraindication of soft contact lens
19.5 Indication and contraindications of RGP lens
19.6 Preliminary examination for Contact lens
19.7 Complications of soft contact lens

20. Low vision and visual rehabilitation:

20.1 Definition of low vision
20.2 Causes of low vision
20.3 Refraction technique in Low vision
20.4 Optical devices used in Low vision
20.5 Non-optical devices used in low vision
20.6 Types of magnification used for low vision patient
20.7 Telescope in Low vision

21.Optics and refractive error:

21.1 Definition of refractive error
21.2 Types of refractive error
21.3 Anisometropia and Aniseikonia
21.4 Pathological myopia

22.Dispensing Optics:

22.1 Ophthalmic lens materials
22.2 Lens curvature and power specifications
22.3 Interpupillary distance measurement
22.4 Lensometer
22.5 Prism prescription
22.6 Types of coating on lens
22.7 Bifocal glasses and its materials
22.8 Progressive addition lenses
22.9 Frame materials, parts, types of frame

23. Amblyopia:

23.1 Definition
23.2 Types
23.3 Diagnosis
23.4 Management

24. Blood and nerve supply of eye:

24.1 Arterial supply to different parts of eye
24.2 Venous drainage from eye
24.3 Nerve supply to different parts of eye
24.4 Parasympathetic and sympathetic control system in eye

25. Extra-ocular muscles:

25.1 Types of muscle in eye
25.2 Actions of extra-ocular muscles
25.3 Axis and plane for movement of eyeball
25.4 Different types of gazes

26. Functional vision:

26.1 Types of functional vision
26.2 Implications of functional vision
26.3 Measurement of functional vision

27. Visual acuity:

27.1 Definition
27.2 Types of Visual acuity
27.3 Measurement of visual acuity
27.4 Different types of charts for Visual acuity

माथि उल्लिखित पाठ्यक्रमका एकाईहरुबाट सोधिने प्रश्नहरुको संख्या निम्नानुसार हुनेछ ।

Unit Number	MCQs Marks	Long questions Marks	Short questions Marks
1.	3		
2.	4		1x5=5
3.	2		
4.	3		
5.	2		
6.	4		2x5=10
7.	2		
8.	2		
9.	4		
10.	3		
11.	4	1x10=10	
12.	2		
13.	2		
14.	2		
15.	3		1x5=5
16.	4		1x5=5
17.	2		
18.	2		1x5=5
19.	4	1x10=10	1x5=5
20.	3	1x10=10	
21.	2		
22.	4		1x5=5
23.	2		
24.	3		
25.	3		1x5=5
26.	2		
27.	2		
Total	**75x1=75**	**3x10=30**	**9x5=45**

प्रयोगात्मक परीक्षाको पाठ्यक्रम

समय :६० मिनेट

पूर्णाङ्क: ५०

उतीर्णाङ्क २५

S.N.	Topics	Full marks	Time(min)
1	Visual acuity	5	5
2	Retinoscopy	5	10
3	Refraction	5	5
4	Biometry	5	5
5	History taking	5	5
6	Investigations	5	10
7	Orthoptic check up	10	10
8	Slit lamp biomicroscope examination	5	5
9.	Ophthalmoscope	5	5
Total		**50**	**60**

The End