

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान, सेवा आयोग
 प्राविधिक सेवा, आँखा रोग समूह, अप्थ्याल्मिक असिस्टेन्ट पद, तह ५ को
 खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम
एवं परीक्षा योजना

१. प्रथम चरण : – लिखित परीक्षा						पूर्णाङ्क :- २००	
पत्र	विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या X अङ्क	समय
प्रथम	प्राविधिक विषय, सामान्य ज्ञान र	१००	४०	वस्तुगत	बहुवैकल्पिक प्रश्न	५० प्रश्न x २ अङ्क	४५ मिनेट
द्वितीय	सम्बन्धित कानूनहरु	१००	४०	विषयगत	प्रश्नोत्तर	१० प्रश्न X १०अङ्क	३ घण्टा
२. द्वितीय चरण : – अन्तर्वार्ता							
विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली			समय	
अन्तर्वार्ता	३०	-	मौखिक				

द्रष्टव्य :

- यो परीक्षा योजनालाई प्रथम चरण (लिखित परीक्षा) र द्वितीय चरण (अन्तर्वार्ता) गरी दुई चरणमा विभाजन गरिएको छ ।
- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- लिखित परीक्षामा यथासम्भव पाठ्यक्रमका सबै एकाईबाट प्रश्नहरु सोधिनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरुको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- विषयगत प्रश्नमा प्रत्येक पत्र/विषयका प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरु हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरुको उत्तर सोही खण्डका उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरु परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागू मिति :- २०७९/१२/२१

नोट: प्रथम पत्र र द्वितीय पत्रको विषयवस्तु एउटै हुनेछ ।

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प्रथम तथा द्वितीय पत्र :-
प्राविधिक विषय, सामान्य ज्ञान र सम्बन्धित कानूनहरु
(Technical Subject, General Knowledge and Related Legislation)

खण्ड (A): Technical Subject

1. Basic of general sciences (Physics biochemistry, zoology, Botany)

This includes essential knowledge:

- Laws of reflection and refraction, Refractive index
- Types of chemical bond.
- Characteristics of acids, bases and salts.
- Antacids and antabases and their medical uses
- Structure (Linear Cyclic) of glucose,
- Functions of Carbohydrates
- Introduction of lipid, fat and oil and their natural sources.
- muscular tissue and its types, striated, smooth and
- Cardiac muscles of animals.
- Nervous tissue and its types.
- Morphology of fungal plant
- Characteristics of a virus

2. General Anatomy and Physiology (Systems of the Body)

This includes general concepts of anatomy and physiology of human body:

Anatomical terms,

- Accessory organs and glands of the skin.
- Structures and functions of the heart
- Components and function of the blood.
- Terms related to the skeletal system : axial ,appendicular ,articular cartilage ,diaphysis, epiphysis fontanel , hematopoiesis , periosteum
- Classifications of joints,
- structure and Divisions of the central nervous system:Classifications of neurons and neuralgia
- Self-healing nature of body cells and tissues.
- Physiological terms: Cardiovascular, Digestion ,Excretion ,Organ ,Peritoneal
- Pericardial ,Thoracic Visceral ,Homeostasis
- Factors affecting growth and repair. Coagulation factors.
- Cranial nerves and their function
- Measurement of pulse and blood pressure

3. Ocular Anatomy and Physiology

This includes general concepts of basic knowledge of the anatomy and physiology of the eye.
This includes:

- Embryology of the eye
- Anatomy along with blood and nerve supply of eye lids and adnexa, conjunctiva, cornea, sclera, uveal tract, lens, vitreous humor, retina, angle structure
- Physiology of the cornea, aqueous humour, metabolism of cornea, lens and vitreous
- Anatomy of orbit and its walls
- Anatomy of extraocular muscles
- Anatomy and functions of cranial nerves related to eye
- Anatomy of lacrimal drainage systems
- Formation and drainage of aqueous humour
- Anatomy and physiology of visual pathway
- Anatomy of pupillary pathway and pupillary reflex

4. Ocular Pharmacology

This includes concepts on pharmacology with special reference to eye. Selection of appropriate drugs for specific disease/conditions, their actions, indications, Contraindications and side effects.

This includes:

- Pharmacological terminologies like half life, plasma concentration of drug, bioavailability, shelf life, expiry date
- Concepts of pharmacodynamics, pharmacokinetics
- Routes of administration of drugs
- Mechanism of action, indication, contraindication, side effects precautions of:
 - Different types of antibiotics, their mechanism of action and spectrum of activity
 - Drugs used in gastrointestinal systems, respiratory system, cardiovascular system, Central Nervous System
 - Analgesic, antipyretic and anti-inflammatory drugs: Mechanism of action, indication, Contraindication, side effects and precautions
 - Steroidal drugs
 - Nutritional Supplements
 - Antihistamines and allergic
 - Mydriatics and Cycloplegics
 - Miotics and Antiglaucoma drugs
 - Lubricating drugs

6. Systemic Disease of the eye

This includes ideas of disease in general medicine related to the eyes

This includes:

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- Diabetes Mellitus and its effects on eye
- Hypertension and its effects on eye
- Thyroid Eye Disease and its effects on eye
- Vitamin A deficiency and its effects on eye
- Tuberculosis
- Leprosy
- Syphilis
- Gonorrhoea
- Rubella
- Toxoplasmosis
- HIV/AIDS

7. Binocular Single Vision and its abnormalities

This includes identification and management of different binocular vision abnormalities.

This includes:

- Understand the function of EOM
- Different types of eye movement
- Accommodation: Introduction, anomalies and assessment
- Latent and Manifest misalignment of the eyes
- Motor and Sensory adaptation to strabismus
- Basic Tests in Orthoptics setting
- Hirschberg and Krimsky test
- Cover test and its types
- Test of convergence and accommodative problems
- Test for suppression
- Test for stereopsis
- Test for Prism Fusion range
- Amblyopia and its management

8. Optics and Refraction

This includes basic knowledge of optics and refraction, understanding of the light and its clinical implications, different optical condition of the eye. This includes:

- Light, its nature and interaction with reflective and refractive medium
- Cardinal points
- Schematic Eye
- Lens design options in minus and plus lens
- Meniscus lens, Lenticular lens and Myodisc
- Manufacturing of Ophthalmic lenses
- Properties of Ophthalmic lens
- Lens aberrations
- Myopia and its classification based on etiology
- Hyperopia and classification based on etiology

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- Astigmatism and types of astigmatism
- Accommodation and its physiology
- Presbyopia and its classification
- Parts of retinoscope, optical principle, reflex characteristics and procedure
- Techniques of subjective refraction and its importance
- Specifying lens power, prescription writing and power verification

9. Investigative Ophthalmology

This includes different investigation procedures for specific eye problems and interpretation the findings of the investigations. This includes:

- Visual acuity (near and distance)
- Colour vision and contrast sensitivity assessment
- Intraocular pressure
- Visual field
- Ultrasonography
- FFA
- Anterior segment and fundus photography
- Exophthalmometry
- Pachymetry
- Keratometry
- Gonioscopy
- Direct Ophthalmoscopy
- Indirect Ophthalmoscopy
- Slit lamp bio microscopy
- Biometry

10. Ophthalmic Nursing Care and Operation Theatre Management

This includes basic ophthalmic nursing procedure required to perform during, after and before surgery. This includes:

- Respiration: definition, types, characteristics, factors affecting temperature, pulse, respiration and blood pressure
- Principles, Techniques and Measurement of temperature, pulse, respiration and blood pressure
- Objective of Operation Theatre
- Operation Theatre management and aseptic technique
- Trolley preparation in different eye surgery
- Scrub and circulation
- OT Hazards and risk management
- Definition, types of ocular anesthesia, equipment
- Management of recovery patient
- Pre and post operative management of different types of ocular surgery
- Routes of administration of drugs

11. Ocular Surgery Assisting

This includes knowledge and skills on ocular surgical procedures to assist the Ophthalmologist. Includes:

- Instruments, step, consumable and medicines in
- cataract surgery
- glaucoma surgery
- nasolacrimal passage surgery
- Strabismus surgery
- Keratoplasty surgery
- Vitro-retinal surgery
- Lid surgery
- Orbitotomy surgery
- Enucleation, evisceration and extentration surgery
- Excisional biopsy
- Electroepilation
- Pterygium excision and conjunctival graft
- Preparation of patient, surgical area, step of surgery, possible complication and management of extra ocular surgeries
- Trolley preparation, consumable and post operative management of
- Entropion
- Chalazion
- lid laceration repair
- incision and drainage of lid abscess and externum

12. Community Ophthalmology

This includes planning, implementing, monitoring and evaluating the eye health and interventions in defined population. Developing tools to assess the magnitude of eye problem, calculating disease burden and making conversation with current national and global eye health strategies and planning on eye health. This includes:

- Concept of health given by Alma-Ata declaration/WHO
- Primary health care, its definition and elements
- Measuring disease burden in community (Magnitude, prevalence, incidence)
- Concepts, Importance, Components of community participation
- Health/Eye health status indicators
- Basic Health profile of Nepal
- Prevalence of blindness and visual impairment in Nepal
- Calculation of WHO standard of visual outcome
- Sustainable Development Goals
- WHO action Plan
- WHO and IAPB eye health strategies at global and regional level

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13. Code of Ethics

- Legal issues related to the practice
- Registration and governance of clinical practices
- Professionalism and communication
- Code of conducts of health systems and councils of Nepal

खण्ड (B): General Knowledge and Related Legislation

१. सामान्य ज्ञान तथा ऐन, नियमहरू

- १.१ नेपालको भौगोलिक, ऐतिहासिक, आर्थिक, सामाजिक, सांस्कृतिक र राजनैतिक अवस्था सम्बन्धी सामान्य जानकारी ।
- १.२ राष्ट्रिय र अन्तर्राष्ट्रिय महत्वका समसामयिक घटनाहरू : राजनैतिक, आर्थिक, वैज्ञानिक, खेलकूद, सूचना प्रविधि, पुरस्कार, स्वास्थ्य
- १.३ पाटन स्वास्थ्य विज्ञान प्रतिष्ठान ऐन, २०६४
- १.४ पाटन स्वास्थ्य विज्ञान प्रतिष्ठानको कर्मचारी सेवाका शर्त र सुविधा सम्बन्धी नियमावली, २०६७
- १.५ पाटन स्वास्थ्य विज्ञान प्रतिष्ठान आर्थिक प्रशासन नियमावली, २०६७
- १.६ पाटन अस्पताल संचालन विनियमावली, २०६७
- १.७ नेपाल स्वास्थ्य सेवा ऐन, २०५३ र स्वास्थ्य सेवा नियमावली, २०५५
- १.८ नेपाल मेडिकल काउन्सिल ऐन, २०२० र नियमावली
- १.९ नेपाल नर्सिङ परिषद् ऐन, २०५२
- १.१० नेपाल स्वास्थ्य व्यवसायी परिषद् ऐन, २०५३

प्रथम तथा द्वितीय पत्रमा यथासम्भव निम्नानुसार प्रश्नहरू सोधिनेछ ।

प्रथम पत्र			
खण्ड	अङ्कभार	प्रश्न संख्या	
		वस्तुगत	विषयगत
A	८०	४० प्रश्न X २ अङ्क = ८०	-
B	२०	१० प्रश्न X २ अङ्क = २०	-
जम्मा		५० प्रश्न X २ अङ्क = १००	-
द्वितीय पत्र			
खण्ड	अङ्कभार	प्रश्न संख्या	
		वस्तुगत	विषयगत प्रश्नोत्तर
A	१००	-	१० प्रश्न x १० अङ्क = १००
B	-	-	-
जम्मा			१० प्रश्न x १० अङ्क = १००

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