

निजामती कर्मचारी अस्पताल
प्राविधिक सेवा, डेन्टिष्ट्री समूह, डेन्टल सर्जरी उपसमूह, रजिष्ट्रार पद, आठौं तहको खुला तथा आन्तरिक
प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

प्रथम चरण :- लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २००

द्वितीय चरण :- अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ३०

१. प्रथम चरण (First Phase): परीक्षा योजना (Examination Scheme)

Paper	Subject		Marks	Full Marks	Pass Marks	No. Questions & Weightage	Time
I	General Subject	Part I: Management	50	100	40	6 × 5 = 30 (Short answer) 2 × 10 = 20 (Long answer)	3.00 hrs
		Part II: General Health Issues	50			6 × 5 = 30 (Short answer) 2 × 10 = 20 (Long answer)	
II	Technical Subject			100	40	4 × 15 = 60 (Critical Analysis) 2 × 20 = 40 (Problem Solving)	3.00 hrs

२. द्वितीय चरण (Second Phase)

Subject	Full Marks	Examination System
Interview	30	Oral

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ ।
- अस्पतालको प्राविधिक सेवा अन्तर्गतका सबै समूह/सबै उपसमूहहरूको लागि प्रथमपत्रको पाठ्यक्रमको विषयवस्तु एउटै हुनेछ । तर द्वितीयपत्र Technical Subject को पाठ्यक्रम समूह/उपसमूह अनुरूप फरक फरक हुनेछ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ । परीक्षामा सोधिने **प्रश्नसंख्या र अङ्कभार** यथासम्भव सम्बन्धित पत्र, विषयमा दिईए अनुसार हुनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको 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 ।
- वस्तुगत बहुवैकल्पिक हुने परीक्षामा परीक्षार्थीले उत्तर लेख्दा अंग्रेजी ठूलो अक्षर (Capital letter) A, B, C, D मा लेख्नुपर्नेछ । सानो अक्षर (Small letter) a, b, c, d लेखेको वा अन्य कुनै सङ्केत गरेको भए सबै उत्तरपुस्तिका रद्द हुनेछ ।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन ।
- विषयगत प्रश्नहरूको हकमा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ ।
- विषयगत प्रश्नमा प्रत्येक पत्र/विषयका प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डका उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भएतापनि पाठ्यक्रममा परेका कानून, ऐन, नियम, विनियम तथा नीतिहरू परीक्षाको मितिभन्दा 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 उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागू मिति : आ.व. २०७९/०८०

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Paper I: General Subject
Part I: Management
(6 × 5) + (2 × 10) = 50 Marks

1. Management

- 1.1. Health care management system in Nepal and other parts of the world
- 1.2. Fundamental principles of healthcare institution and hospital management.
- 1.3. Effective hospital management principles
- 1.4. Purpose of medical and non-medical data and records
- 1.5. Ethics and responsibility of management
- 1.6. Concept of management and its application in health care including hospital
 - 1.7.1 Management: Concept, principles, functions, scope and role, level and skills of manager
 - 1.7.2 Planning: Concept, principles, nature, types, instruments and steps
 - 1.7.3 Leadership: Concept, function, leadership styles, leadership and management
 - 1.7.4 Coordination: Concept, types, techniques of effective coordination
 - 1.7.5 Communication and counselling: Concept, communication processes and barrier to effective communication, techniques for improving communication
 - 1.7.6 Decision making: Importance, types, rational process of decision making, problem solving techniques, improving decision making
 - 1.7.7 Participative management: Concept, advantage and disadvantage, techniques of participation
 - 1.7.8 Time management: Concept, essential factors and strategies for effective time management
 - 1.7.9 Conflict management: Concept, approaches to conflict, levels of conflict, causes of conflict and strategies for conflict management
 - 1.7.10 Stress management: Concept, causes and sources of stress, techniques of stress management
 - 1.7.11 Change management: Concept, sources of organizational change, resistance to change, management of resistance to change
 - 1.7.12 Appreciative inquiry: Concept, basic principle and management
 - 1.7.13 Human resource management: Concept, functions and different aspects
 - 1.7.14 Health manpower recruitment and development
 - 1.7.15 Financial management: Concept, approaches, budget formulation and implementation, Auditing and topics related to fiscal administration

Part II: General Health Issues
(6 × 5) + (2 × 10) = 50 Marks

2. General Health Issues

- 2.1. Present constitution of federal republic of Nepal (including health and welfare issues)
- 2.2. Organizational structure of Ministry of Health at national/federal, regional/state, district (if applicable), municipal and village council level
- 2.3. Professional council and related regulations
- 2.4. National Health Policy
- 2.5. Health Service Act and Regulation
- 2.6. Second Long term health plan
- 2.7. Health Management Information System, forms, indicators, annual reports
- 2.8. Human Development Indices, Sustainable Development Goals
- 2.9. Health volunteers in the national health system, its rationale, use and effectiveness

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- 2.10. Local governance and community participation in health service delivery
- 2.11. Health Insurance and financing in health care
- 2.12. Alternative health care system: Ayurveda, homeopathy, Unani, Chinese etc.
- 2.13. Indigenous and traditional faith health and health practices
- 2.14. International Health Agencies: Roles and responsibilities of WHO, UNICEF, UNFPA, Inter-agency relationships, Government-agency coordination: Joint Annual Review meeting
- 2.15. Supervision, types and its usage in health sector
- 2.16. Monitoring and evaluation system in health sector
- 2.17. National Health Training Centre
- 2.18. National and International Disaster Plan, Coordination
- 2.19. General introduction of Civil Service Hospital and its Bylaws

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Paper II : Technical Subject

Section (A) – 50 % Marks

1. General Principle of Surgery

- 1.1 Evolution and History of Oral and Maxillofacial Surgery
- 1.2 Diagnosis, history taking, clinical examination, investigations
- 1.3 Informed consent/medico-legal issues
- 1.4 Concept of essential drugs and rational use of drugs in oral and maxillofacial surgery
- 1.5 Communication skills with patients- understanding, clarity in communication, compassionate explanations and giving emotional support at the time of suffering and bereavement
- 1.6 Principles of surgical audit - understanding the audit process and outcome
- 1.7 Principles of surgery- developing a surgical diagnosis, basic necessities for surgery, aseptic/sterilization technique, incisions, flap designs, tissue handling, hemostasis, dead space management, decontamination and debridement, suturing, edema control, patient general health and nutrition
- 1.8 Medical emergencies - Prevention and management of altered consciousness, hyper sensitivity reaction, chest discomfort, respiratory difficulty
- 1.9 Pre-operative workup - Concept of fitness for surgery; basic medical work up; work up in special situation like diabetes, renal failure, cardiac and respiratory illness; risk stratification
- 1.10 Surgical sutures, Properties of suture materials, appropriate use of sutures and drains, different types in OMFS
- 1.11 Post-operative care- concept of recovery room care, Airway management, Assessment of Wakefulness, management of cardio vascular instability in this period, Criteria for shifting to the ward, pain management
- 1.12 Wound management- Types, Wound healing, factors influencing healing, basic surgical techniques
- 1.13 Surgical Infections - Asepsis and antisepsis, Microbiological principles, Rational use of antibiotics, special infections like Synergistic Gangrene and Diabetic foot infection, Hepatitis, tuberculosis and HIV infection and cross infection

2. Assessment and Diagnosis

- 2.1 Airway obstruction/management - Anatomy of the airway, principles of keeping the airway patent, mouth to mouth resuscitation, Oropharyngeal airway, endotracheal intubation, Cricothyroidectomy, Tracheostomy
- 2.2 Assessment of trauma-multiple injuries patient, closed abdominal and chest injury penetrating injuries, pelvic fractures, urological injuries, vascular injuries
- 2.3 Maxillofacial trauma - basic principles of treatment, primary care, diagnosis and management of hard and soft tissue injuries of Maxillofacial region including Mandible, Maxilla, Middle third ZMC, Frontal bone, Comprehensive management of poly trauma patients

- 2.4 Aesthetic facial surgery - detailed knowledge of structures of face & neck including skin and underlying soft tissues, diagnosis and treatment planning of deformities and condition affecting facial skin, underlying facial muscles, bone, eyelids, external ear etc., surgical management of post acne scarring, face lift, blepharoplasty, otoplasty, facial bone recountouring
- 2.5 Maxillofacial radiology/radio diagnosis - Various diagnostic methods and imaging techniques. Use of ct scan, mri, ultrasound, sialography and arthrogram in OMFS

3. Surgery (Cranio-facial Deformities, Laser Surgery, Cryosurgery)

- 3.1 Orthognathic surgery - Embryology and surgical anatomy of the oro-facial region. Normal and abnormal growth and development of the face and jaws. Investigation, diagnosis and surgical management of dento-facial deformity including the use of grafts. Understanding of the principles of orthodontic treatment and the joint management of dento-facial deformity with the orthodontists. Various osteotomy techniques for correction of dentofacial deformities
- 3.2 Laser surgery - The application of laser technology in the surgical treatment of various Maxillofacial lesions
- 3.3 Distraction osteogenesis for correction of maxillofacial deformities
- 3.4 Cryosurgeries - Principles, the application of cryosurgery in the surgical management of lesion amenable to such surgeries
- 3.5 Cleft lip and palate surgery - detailed knowledge of the development of the face, head and neck diagnosis and treatment planning, Current concepts in the management of cleft lip and Palate deformity, knowledge of nasal endoscopy and other diagnostic techniques in the evaluation (speech and hearing, concept of multi disciplinary team management)
- 3.6 Craniofacial surgery - basic knowledge of developmental anomalies of face, head and neck basics concept in the diagnosis and planning of various head and neck anomalies including facial cleft, craniosynostosis, syndromes, etc., Current concepts in the management of craniofacial anomalies

Section (B) – 50 % Marks

4. Reconstructive and Therapeutic Techniques (Maxillofacial Pathology, Oncosurgery and Reconstructive surgery)

- 4.1 Tissue grafting - Understanding of the biological mechanisms involved in autogenous and heterogeneous tissue grafting
- 4.2 Reconstructive oral and maxillofacial surgery – Oral and Maxillofacial reconstruction with various techniques involving hard and soft tissue
- 4.3 Odontogenic and non odontogenic Cyst and tumors of head and neck region and their management - including principles of tumor surgery, giant cell lesion of jaw bones, fibro osseous lesions of jaw
- 4.4 Head and neck oncology – Molecular biology and understanding of the principles of management of head and neck oncology

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- 4.5 Micro vascular surgery- basic principles and techniques for reconstruction of head and neck region
- 4.6 Disorders of the salivary glands- The investigation and treatment of diseases of the minor and major salivary glands. Obstructive and inflammatory condition, Infections and Tumours
- 4.7 Maxillary Sinus pathology - A thorough understanding of the sinus diseases of odontogenic and non-odontogenic origin including tumour, Management of sinus disorders, in particular oroantral communications related to dental procedures
- 4.8 Oral Medicine and Therapeutics- Oral mucosal lesions and oral manifestations of systemic diseases. Precancerous diseases of oral cavity

5. Patient Management (Local and general Anesthesia, Implantology and Minor oral surgery)

- 5.1 Local anaesthesia – Types ,composition , techniques and complications in OMFS
- 5.2 General Anesthesia - stages of Anesthesia, pharmacology of inhalation, intravenous and regional anesthetics, muscle relaxants, conscious sedation
- 5.3 General patient management - competence in physical assessment of patients of surgery, competence in evaluation of patients presenting with acute injury, particularly to maxillofacial region. Competence in the evaluation of management of patients for Anesthesia
- 5.4 All aspects of dento alveolar surgery and its complications – Exodontia, apicoectomy, transplantation , impaction, surgical exposure of impacted teeth
- 5.5 Pre-prosthetic surgery - wide range of surgical reconstructive procedures involving their hard and soft tissues of the edentulous jaws
- 5.6 Implantology –Rationale, diagnosis, treatment planning principles, surgical procedures for insertion of various types of implants. Complications and their management

6. Other disorders and infections (Myofacial pain, Nerve Injuries and Maxillofacial infections)

- 6.1 Facial pain; Facial palsy, neuralgia and nerve injuries. Pain control- acute and chronic pain, cancer and non-cancer pain
- 6.2 Temporomandibular joint disorders - TMJ disorders, TMJ ankylosis – bony and TMJ ankylosis tissue and their sequelae , therapeutic arthroscopic surgery procedures
- 6.3 Neurological disorders of maxillofacial region-diagnosis and management of Trigeminal Neuralgia, MPDS, Bells palsy, Frey’s syndrome
- 6.4 Head and Neck Infections- Fascia of head and neck. General and anatomical considerations in the spread of odontogenic space infection with emphasis on the management of pericoronitis, abscess, dry socket, cellulitis (Ludwig Angina), osteomyelitis, and various head and neck potential space infections

7. Recent advances in Oral and Maxillofacial Surgery