

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान सेवा आयोग

प्राज्ञिक सेवा, आकस्मिक तथा बहिरंग समूह, **Emergency Medicine** उपसमूह, सहायक प्राध्यापक पद, नौ ख (१ ख) तहको खुला र 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

प्रथम चरण (First Phase) : **लिखित परीक्षा योजना (Written Examination Scheme)**

Paper	Subject		Marks	Full Marks	Pass Marks	No. Questions & Weightage		Time Allowed
I	General Subject	Part I: Management, General Health Issues, Academic Research and Teaching-Learning Practices	50	100	40	10 × 5 = 50 (Subjective)	1.30 hrs	2.15 hrs
		Part II: Technical Subject (Relevant Subject)	50			50 × 1 = 50 (Objective Multiple Choice)	45 min	
II	Technical Subject (Relevant Subject)			100	40	7 × 10 = 70 (Long answer) 2 × 15 = 30 (Critical Analysis)		3.00 hrs
द्वितीय चरण (Second Phase)								
	Interview			30		Oral		

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ ।
- प्रतिष्ठानको प्राज्ञिक सेवा अन्तर्गतका सबै समूह/सबै उपसमूहहरूको लागि प्रथमपत्रको Part I को पाठ्यक्रमको विषयवस्तु एउटै हुनेछ । तर प्रथम पत्रको Part II र द्वितीयपत्र Technical Subject को पाठ्यक्रम समूह/उपसमूह अनुरूप फरक फरक हुनेछ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ । प्रथम पत्रको Part II र द्वितीय पत्रको विषयवस्तु एउटै समूहको हकमा समान 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 लागु मिति : २०७८/१०/१७

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Paper I: General Subject

Part I:

(Management, General Health Issues, Academic Research and Teaching - Learning Practices)

Section (A) - 25 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

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
- 2.10. Local governance and community participation in health service delivery

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- 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. Patan Academy of Health Sciences Act, Mission, Goals, Organogram
- 2.20. Scope and function of Patan Academy of Health Sciences executive bodies (senate, executive committee, academic council, faculty board, hospital management committee, subject committee), various other committees

Section (B) - 25 Marks

3. Academic Research

- 3.1 Ethics, Bio-ethics and Professionalism
- 3.2 Human dignity and Human Right
- 3.3 Benefit and Harm
- 3.4 Autonomy and Individual responsibility
- 3.5 Consent and capacity to consent
- 3.6 Privacy and confidentiality
- 3.7 Respect for humans and personal integrity
- 3.8 Non-discrimination and non-stigmatization
- 3.9 Respect for cultural diversity and pluralism
- 3.10 National Health Research Council (NHRC) and its guidelines
- 3.11 Research process: ethical research proposal development, research principles, methods and materials, conclusion/recommendation/lesson learnt, commonly used referencing styles
- 3.12 IRB/IRC forms, types, use, importance; getting IRB/IRC clearance
- 3.13 Ethics on research methodology: sample selection, sample size calculation, ensuring reliability and validity of the instruments as well as methods proposed for health research
- 3.14 Quantitative and Qualitative studies
- 3.15 Data analysis (data visualization, descriptive statistics, inferential statistics with statistical hypotheses and appropriate tools/methods for quantitative studies; theme and code generation, thematic analysis, content analysis, grounded theory for qualitative and triangulation for mixed method studies)
- 3.16 Research ethics on vulnerable and non-vulnerable population
- 3.17 Research proposal/protocol/publication:
- 3.18 Publication ethics, plagiarism including self-plagiarism

4. Teaching - Learning, Assessment and Evaluation

- 4.1 Lancet Commission Report on Education of Health Professionals
- 4.2 Adult learning: Theories, principles, use, importance and outcomes, Andragogy vs. Pedagogy

- 4.3 Conventional teaching - learning: Didactic lectures, Teacher centred approaches, use and importance
- 4.4 Surface learning, deep learning and metacognition
- 4.5 Integrated teaching: Genesis, use, importance and outcomes
- 4.6 Problem-based learning: Genesis, use, importance and outcomes
- 4.7 SPICES model its use, importance and outcomes
- 4.8 Socialization, self-directed learning, mentoring, role model
- 4.9 Community orientation/community posting, re-orientation of medical education camp, community based learning and community engaged teaching-learning methods/models, use, importance and outcomes
- 4.10 Outcome Based Education (Competency-based Medical/Health Professions Education): Genesis, use, importance and outcomes
- 4.11 Experiential learning, Reflective practice, Feedback and feed-forward, Situated learning, Co-operative learning, Communities of practice
- 4.12 Assessment of students
 - 4.12.1 Blueprinting (Table and specification) : use, importance and outcomes
 - 4.12.2 Bloom's taxonomy of cognitive, psychomotor and affective domains, use and importance
 - 4.12.3 Diagnostic, Formative, Summative and Professional exams
- 4.13 Assessment of knowledge: Selection methods like Multiple Choice Questions, Extended Matching Items and supply methods like Short Answer Question, Problem Based Question, Long Answer Question with or without model answers and marking schemes, unstructured, semi-structured and structured viva-voce examination, advantages and limitations, use and importance, outcomes and its use in quality control
- 4.14 Assessment of performance (in-vitro): Direct observation of skills in the simulated setting, lab, ward etc. with or without checklist, Objective Structured Practical Examination, Objective Structured Clinical Examination, Standardized patients, use and importance, analysis, quality assurance, outcomes and its use in quality control
- 4.15 Assessment of performance (in-vivo): Mini-Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedural Skills (DOPS), Case-Based Discussion (CbD), OSATS/ PBA, Multi-Source feedback (360 degree evaluation) use and importance for competency based health professions education, analysis, quality assurance, outcomes and its use in quality control
- 4.16 Assessment of observable behaviours in small groups e.g. Problem Based Learning sessions, Community Based Learning and Education sessions, Clinical clerkship rotations
- 4.17 Evaluation: Difference between assessment and evaluation, theory of change and its use in health professions education, process and outcome evaluation, qualitative, quantitative and mixed methods used in evaluation of health professions education

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Paper I

Part II: Technical Subject

Section (C) - 25 Marks

1. **Applied Basic Sciences**
 - 1.1 Applied anatomy
 - 1.2 Applied Physiology
 - 1.3 Applied Pathology
 - 1.4 Applied Pharmacology
 - 1.5 Applied immunology
 - 1.6 Applied biostatics
 - 1.7 Applied research methods
 - 1.8 Applied Molecular biology and genetics

2. **Knowledge of outpatient department**
 - 2.1 Initial assessment with logical approach to undifferentiated illness.
 - 2.2 Impact of illness in the context of the family and community
 - 2.3 Sensitive to psychosocial issues related to presentation
 - 2.4 Follow- up management plans especially in chronic disease (e.g. diabetes, hypertension, asthma, COPD, APD ,anxiety/depression, growth and development)
 - 2.5 STD, antenatal and postnatal care, well women and men assessments
 - 2.6 Care of previously treated problems
 - 2.7 Coordination of care

3. **Medicine**
 - 3.1 Chest pain (acute and chronic)
 - 3.2 Palpitations
 - 3.3 Shortness of breath (acute, intermittent and chronic)
 - 3.4 Wheezing/Stridor
 - 3.5 Haemoptysis
 - 3.6 Cough
 - 3.7 Cyanosis
 - 3.8 Swelling of body parts
 - 3.9 Dyspepsia
 - 3.10 Reflux
 - 3.11 Haematemesis and malaena
 - 3.12 Upper and lower abdominal pain (acute and chronic)
 - 3.13 Diarrhoea
 - 3.14 Vomiting
 - 3.15 Abdominal distension
 - 3.16 Constipation
 - 3.17 jaundice
 - 3.18 Dysuria
 - 3.19 Haematuria
 - 3.20 Impotence
 - 3.21 Confusion
 - 3.22 Coma
 - 3.23 Headache
 - 3.24 Convulsions

- 3.25 Syncope
- 3.26 paralysis
- 3.27 paraesthesia
- 3.28 Weakness
- 3.29 Fever
- 3.30 Anorexia
- 3.31 Fatigue
- 3.32 Myalgia
- 3.33 Itch
- 3.34 Rash
- 3.35 Abnormal bleeding
- 3.36 Swollen glands
- 3.37 Joint swelling
- 3.38 Joint pain
- 3.39 Thyroid disease
- 3.40 Diabetes
- 3.41 Tuberculosis
- 3.42 Drug related problem -iatrogenic, poisoning, or abuse including alcohol/smoking
- 3.43 Anaemia
- 3.44 Depression
- 3.45 Hypertension
- 3.46 Spinal dysfunction
- 3.47 Urinary tract infection
- 3.48 Holistic management of patients with HIV/AIDS
- 3.49 palliative care

4. **Paediatrics**

- 4.1 Neonatal Knowledge-Normal Newborn Care
 - 4.1.1 Prematurity/Postmaturity
 - 4.1.2 Birth trauma/Asphyxia
 - 4.1.3 Respiratory distress
 - 4.1.4 Jaundice
 - 4.1.5 Sepsis
 - 4.1.6 Congenital problems (cardiac, hip, cleftpalate, tracheo-oesophageal fistula, imperforate anus, diaphragmatic hernia)
- 4.2 Acute Life Threatening Problems
 - 4.2.1 Stridor /Airway compromise (Croup/epiglottitis)
 - 4.2.2 Respiratory distress and potential respiratory failure (severe ARI, Asthma)
 - 4.2.3 Circulatory failure/shock including Sepsis and dehydration
 - 4.2.4 Altered Sensorium including Meningitis/ encephalitis / encephalopathies (hepatic, uraemic, hypertensive)
 - 4.2.5 Seizures and status epilepticus
 - 4.2.6 Congestive heart failure
 - 4.2.7 Supraventricular tachycardia
 - 4.2.8 Acute renal failure
 - 4.2.9 Tetanus
 - 4.2.10 Poisoning
 - 4.2.11 Drowning/near drowning

- 4.2.12 Bleeding disorders
- 4.2.13 Diabetic Ketoacidosis
- 4.2.14 Acute Abdominal Pain (distinguish medical and surgical causes)
- 4.3 Feeding Problems: Understanding of Breastfeeding and Nutrition
- 4.4 Growth Disorders: Protein Calorie Malnutrition, failure to thrive, short stature
- 4.5 Common Febrile Illness
 - 4.5.1 ARI (including Pertussis)
 - 4.5.2 Diarrheal diseases (viral, bacterial, Parasitic)
 - 4.5.3 Urinary Tract Infection
 - 4.5.4 Septicemia/Bacteremia
 - 4.5.5 Enteric fever
 - 4.5.6 Malaria
 - 4.5.7 Viral exanthema (measles ,mumps, etc)
 - 4.5.8 Acute tonsillitis
 - 4.5.9 Rheumatic fever/endocarditis
 - 4.5.10 Tuberculosis (TB)
 - 4.5.11 Infective hepatitis
 - 4.5.12 Kala azar
 - 4.5.13 PUO
- 4.6 Cough - including Asthma/Bronchitis/Bronchiolitis
- 4.7 Oedema-including renal (nephritic syndrome, nephritis), Kwashiorkor, cardiac
- 4.8 Chronic abdominal pain
- 4.9 Jaundice
- 4.10 Seizure disorders
- 4.11 Anemia and blood dyscrasias including Leukemias (recognize and refer)
- 4.12 Arthritis (septic arthritis, osteomyelitis, Juvenile Rheumatoid arthritis)
- 4.13 Skin disease/rashes (eg; scabies)
- 4.14 Common eye problems (eg, conjunctivitis)
- 4.15 Common ear problems (eg, otitis media)
- 4.16 Developmental delay/cerebral palsy/mental retardation
- 4.17 Visual/hearing/speech disorders (recognize and refer)
- 4.18 Dehydration
- 4.19 Certain diseases can present in different ways, so specific attention should be paid to
 - 4.19.1 Diabetes mellitus
 - 4.19.2 Hypothyroidism
 - 4.19.3 TB
 - 4.19.4 HIV/AIDS

5. **Dermatology**

The general practice doctor will be able to manage the following common skin conditions:

- 5.1 Bacterial : Superficial bacterial infections, Skin TB , Leprosy
- 5.2 Viral: Herpes simplex, Herpes Zoster, Wart, Molluscum contagiosum
- 5.3 Fungal: Dermatophyte, Candida, Tinea versicolor, Deep Fungal infection
- 5.4 Parasites: Scabies, Pediculosis, Leishmaniasis
- 5.5 Approach : Systemic Causes
 - 5.5.1 Skin Causes – Infective (e.g. Scabies), Urticaria, Dermatitis Herpetiform, Lichen Planus

- 5.6 Common Skin Problems: Eczema/Dermatitis, Acne, Psoriasis, Drugeruption, Erythema multiforme, Erythema , Nodosum, Purpura, Bullous diseases
- 5.7 Skin Ulcers: Hair and Nail Disorders:
 - 5.7.1 Alopecia, Onycholysis, Paronychia
 - 5.7.2 Pigmented Skin Lesion including Melanoma.
 - 5.7.3 Common Lumps and Bumps including Skin Cancers:
 - 5.7.4 Warts, Keratoacanthoma, Basal Cell, Squamous Cell, Carcinoma
- 5.8 Sexually transmitted disease
 - 5.8.1 Non-specific urethritis/cervicitis, punctate balanoposthitis, candidiasis, trichomoniasis,condylomaaccuminata, syphilis, gonorrhea and chancroid
 - 5.8.2 Sexual contact history, past history of STI, medications
 - 5.8.3 Clinical examination and investigation to find other STDs
 - 5.8.4 Contact tracing and treatment of contacts
 - 5.8.5 Regular follow -up of STD cases
6. **Psychiatry**
 - 6.1 Anxiety including Panic and phobic disorders
 - 6.2 Depression
 - 6.3 Conversion/Dissociative disorder
 - 6.4 Psychosis
 - 6.5 Bipolar mood disorder
 - 6.6 Somatic presentations- including pseudo-seizures and multi- symptomatic patients
 - 6.7 Substance Related Disorder
 - 6.8 Childhood Mental Health Conditions
 - 6.9 Concept of diagnostic classification: eg, DSM IV, WHO guidelines
 - 6.10 Concept and simple practice of non -pharmacological approaches to mental health problems
 - 6.11 Drug therapy
 - 6.12 Legal and ethical issues regarding mental competence and detention and relationship with police (recognizing at present there are no laws in Nepal but there is a proposed National Mental Health Act)
 - 6.13 Long term therapy, strategies for optimizing regime and getting compliance
 - 6.14 Liaison with other health workers for management of long term cases
 - 6.15 Practical approach to stabilizing cases before referral
 - 6.16 Common conditions of Primary Care
 - 6.16.1 Anxiety
 - 6.16.2 Depression
 - 6.16.3 Somatic Presentation of mental distress
 - 6.16.4 Culture specific presentation of mental distress
 - 6.16.5 Culture Specific presentation- dhatu, night fall, demon possession, new brides, perceptions about disease
 - 6.16.6 Alcohol and substance misuse
 - 6.16.7 Chronic Tiredness
 - 6.16.8 Sleep disturbances
 - 6.17 Health Promotion and support in chronic mental illness
 - 6.17.1 Monitoring and follow- up in patient with chronic mental illness
 - 6.17.2 Social support for patient and their family
 - 6.17.3 Referral to appropriate specialist care

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- 6.17.4 Work effectively with other workers for the management of people with mental health problems
- 6.18 Stage of life issues
 - 6.18.1 Behavioral disorders in children
 - 6.18.2 Intellectual disability
 - 6.18.3 Childhood and family problems
 - 6.18.4 Adolescent depression and somatization disorders
 - 6.18.5 Perinatal mental illness
 - 6.18.6 At risk -drinking other dangerous behavior in young men and women
 - 6.18.7 Mid-life crises, menopause,sexual problems
 - 6.18.8 Adjustment disorders and chronic physical illness, disability
 - 6.18.9 Dementia
 - 6.18.10 Dying and bereavement
- 7. **Emergency Medicine**
 - 7.1 Triage serious & non-serious problem.
 - 7.2 Manage Major and minor Trauma
 - 7.3 Manage life threatening medical, surgical, paediatric, gynaecological /obstetric emergencies
 - 7.4 Describe concept of Disaster Plan & management
 - 7.5 Manage Medico Legal Cases
 - 7.6 Develops systematic approach to undifferentiable presentation (unconscious patients, chest pain; abdominal pain, dyspnea, etc.)
 - 7.7 Organize and manage emergency services
 - 7.8 Use emergency equipment and supplies available in Nepal
 - 7.9 Develop knowledge about the Emergency Drugs particularly analgesia

Section (D) - 25 Marks

- 8. **Anaesthesia**
 - 8.1 Cardiopulmonary resuscitation(basic and advanced cardiac life support)
 - 8.2 Pre-operative assessment,including assessing ASA Physical status to know whether a GP anaesthetic is appropriate
 - 8.3 Pre-anesthetic prescribing
 - 8.4 General anesthetic prescribing
 - 8.5 Local anesthesia and regional blocks
 - 8.6 Post-operative recovery and monitoring
 - 8.7 Pain management Intravenous fluid management(Pre and post surgery)
 - 8.8 Airway management using facemask, oral airway and intubation
 - 8.9 Regional anesthetic blocks, spinal, epidural and peripheral
 - 8.10 Ketamine anesthetics(total intravenous anesthesia)
 - 8.11 General anesthesia using draw- over technique
 - 8.12 Ether anesthesia (EMO)
- 9. **Surgery**
 - 9.1 **Skin and subcutaneous tissue**
 - 9.1.1 Diagnosis and management of inflammatory condition of skin like cellulites, boils, carbuncle, etc.
 - 9.1.2 Diagnosis and excision of sebaceous cysts, lipomas, etc

- 9.1.3 Diagnosis and management of squamous cell carcinoma, basal cell carcinoma and malignant melanoma
- 9.2 **Burns**
 - 9.2.1 Initial resuscitation
 - 9.2.2 management of fluid
 - 9.2.3 Surgical Management -debridement and grafting
- 9.3 **Lymph Nodes**
 - 9.3.1 Describe the differential diagnosis of lymph node enlargement
- 9.4 **Arterial disorders**
 - 9.4.1 Describe the feature of chronic limb ischaemia including Buerger's disease
 - 9.4.2 Diagnose acute limb ischaemia
 - 9.4.3 Diagnose and manage dry gangrene
 - 9.4.4 Diagnose and manage DVT
- 9.5 **Salivary gland**
 - 9.5.1 Diagnosis and management of parotid and submandibular abscess
 - 9.5.2 Differential diagnosis of parotid and submandibular lump(biopsy is inappropriate)
- 9.6 **Thyroid**
 - 9.6.1 Differential diagnosis of solitary thyroid nodule
 - 9.6.2 Features of nodular goiter, its complications and indications for surgery
 - 9.6.3 Features of thyrotoxicosis, its complications and indications for surgery
 - 9.6.4 Management of hypothyroidism
- 9.7 **Breast**
 - 9.7.1 Method of Breast self examination
 - 9.7.2 Differential diagnosis of breast lump
 - 9.7.3 Triple investigation
 - 9.7.4 Principles of management of breast carcinoma
 - 9.7.5 Differential diagnosis of nipple discharge and indication for surgery
 - 9.7.6 Breast pain
- 9.8 **Upper GI Tract**
 - 9.8.1 Dysphagia : differential diagnosis, Investigations required
 - 9.8.2 Principle of management of oesophageal carcinoma,
 - 9.8.3 Gastro-oesophageal reflux disease: medical management
 - 9.8.4 Peptic ulcer disease: symptomatology, indications for endoscopy, medical management, complications and indications for surgery.
 - 9.8.5 Management of Ulcer GI Bleeding
 - 9.8.6 Management of Gastric carcinoma (Operative details not required)
- 9.9 **Hepatobiliary**
 - 9.9.1 Jaundice : Pathophysiology, differential diagnosis
 - 9.9.2 Liver abscess
 - 9.9.3 Tumors of liver : differential diagnosis
 - 9.9.4 Gallstone disease and its complications
- 9.10 **Pancreas**
 - 9.10.1 Acute pancreatitis: aetiology, definitions of mild and severe pancreatitis, management, complications and indications for surgery
 - 9.10.2 Chronic pancreatitis
- 9.11 **Small Intestine**
 - 9.11.1 Features of small bowel obstruction, its differential diagnosis and management

- 9.11.2 Enteric fever and its complication
- 9.11.3 Appendicitis, appendicular mass and appendicular diagnosis abscess
- 9.12 **Large bowel/Rectum and Anal Canal**
 - 9.12.1 Features of large bowel obstruction and its differential diagnosis
 - 9.12.2 Ulcerative colitis
 - 9.12.3 Bleeding per rectum, differential diagnosis
 - 9.12.4 Hemorrhoids including complications
 - 9.12.5 Perianal abscess
- 9.13 **Hernia**
 - 9.13.1 Inguinal and Femoral
 - 9.13.2 Incisional hernia
- 9.14 **Urology**
 - 9.14.1 Haematuria:differential diagnosis and investigation
 - 9.14.2 Phimosis,paraphimosis
 - 9.14.3 Stones in renal tract:indications for surgery
 - 9.14.4 BHP
 - 9.14.5 Acute urinary retention
 - 9.14.6 Kidney Infection
 - 9.14.7 Vasectomy
 - 9.14.8 Scrotal swelling: differential diagnosis and investigation Undescendedtestis ,Diagnosis and Management of Testicular Torsion
 - 9.14.9 Urethral Strictures
- 10. **Orthopaedics**
 - 10.1 Traumatic condition: Recognition of what need to be done acutely and when referral may be more appropriate where possible
 - 10.1.1 Injuries of the upper limb: (Manage/ Consider Referral if Possible)
 - 10.1.2 Injuries of the lower limb and pelvis: (Manage/Refer)
 - 10.2 Non- Traumatic condition:
 - 10.2.1 Infective condition : Most important, Acute infection: Acute osteomyelitis; Acute septic arthritis; Chronic osteomyelitis; Tubercular infections including spine
 - 10.2.2 Degenerative condition and office orthopaedics
 - 10.3 Approach to diagnosis and conservative management where possible, with referral if possible and benefit from orthopedic consultation.
 - 10.3.1 Osteoarthritis
 - 10.3.2 Gout/Pseudogout
 - 10.3.3 Acute and Chronic low back and cervical pain
 - 10.3.4 Regional Musculo-skeletal condition Shoulder, Elbow, Wrist, Hip, Knee,Ankle
 - 10.4 Other Rarer Condition
 - 10.4.1 Congenital Deformities
 - 10.4.2 Neoplastic condition
 - 10.4.3 Metabolic and other condition
 - 10.4.4 Auto-immune diseases
- 11. **Obstetrics & Gynaecology**
 - 11.1 Antenatal period(normal and abnormal pregnancy)
 - 11.1.1 Normal/ low risk pregnancy and High risk pregnancy

- 11.2 Labour and delivery
- 11.3 Postpartum(Normal puerperium/Abnormal puerperium)
- 11.4 Gynaecology(Local management/Referral)
- 11.5 Medical condition during Pregnancy
 - 11.5.1 DM: Hypertension
 - 11.5.2 Heart disease
 - 11.5.3 Jaundice
- 12. **Family Planning**
 - 12.1 Male and female reproductive anatomy physiology
 - 12.2 The current status of family planning and voluntary surgical contraception in Nepal, including legal status, cultural barriers, myths and prejudices
 - 12.3 The rationale for vasectomy and tubal ligation, their benefits and disadvantages.
 - 12.4 Recognize eligible candidates for voluntary surgical contraception and provide information and counseling services to ensure informed client consent.
 - 12.5 Follow the principles of infection prevention and control and preoperative management for vasectomy and/or the minilap
 - 12.6 Demonstrate the use of aseptic technique, appropriate anaesthesia and analgesia
 - 12.7 Demonstrate the basic surgical skills required for vasectomy and /or minilap.
 - 12.8 Manage post- operative patients, including any complication related to anaesthesia, surgery and early and late complications.
 - 12.9 Techniques for reversal of vasectomy of tubal ligation
 - 12.10 Utilize the common methods of contraception including Depo-Provera, Norplant, Intra-uterine devices, Oral contraceptives
 - 12.11 Follow up patient who accept various methods of contraception
- 13. **Ultrasound**
 - 13.1 The different components of Ultrasound equipment and their function
 - 13.2 Take proper care of the Ultrasound equipment including sterilization of transducers
 - 13.3 Identify artifacts and their usefulness and those that degrade the ultrasounds image
 - 13.4 The ultrasound orientation of the image, scanning techniques and preparation of the patients
 - 13.5 Identify key obstetrics, medical and surgical condition on ultrasound
- 14. **Dentistry**
 - 14.1 Prevent common dental diseases
 - 14.2 Recognize and manage common dental problems
 - 14.3 Manage dental emergencies
 - 14.4 Recognize and manage acute dental and periodontal conditions.
 - 14.5 Perform minor procedures.
 - 14.6 Recognize conditions that need to be referred for further therapeutic measures.
 - 14.7 Temporo- mandibular joint dislocation
 - 14.8 Post dental extraction bleeding
 - 14.9 Gingivitis
 - 14.10 Syncope
 - 14.11 Periodontitis
 - 14.12 Dental caries
 - 14.13 Precancerous condition