

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान
सेवा आयोग
प्राविधिक सेवा, प्राध्यापन समूह, एनेस्थेसियोलोजी उपसमूह, विभिन्न पदहरू (लेक्चरर/उप-प्राध्यापक/सह-
प्राध्यापक/प्राध्यापक) को खुल्ला र आन्तरिक प्रतियोगितात्मक परिक्षाको पाठ्यक्रम

पाठ्यक्रमको रूपरेखा :- यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा परीक्षा लिइनेछ ।

प्रथम चरण :- लिखित परीक्षा

पूर्णाङ्क :- २००

द्वितीय चरण :- अन्तर्वार्ता

पूर्णाङ्क :- ३०

प्रथम चरण :- लिखित परीक्षा (Written Examination)					Full Marks:- 200	
पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्नसंख्या X अङ्क	समय
प्रथम	General Health Issues and Service Specific	१००	४०	वस्तुगत: बहुवैकल्पिक प्रश्न (Objective: Multiple Choice)	१०० प्रश्न x १ अङ्क = १००	१ घण्टा ३० मिनेट
द्वितीय		१००	४०	विषयगत (Subjective)	६ प्रश्न x १० अङ्क = ६० (Long Answer) २ प्रश्न x २० अङ्क = ४० (Critical Analysis & Problem Solving)	३ घण्टा
द्वितीय चरण :- अन्तर्वार्ता (Interview)					Full Marks:- 30	
व्यक्तिगत अन्तर्वार्ता		३०		मौखिक (Oral)		

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा अंग्रेजी हुनेछ ।
- लिखित परीक्षाको उत्तीर्णाङ्क ४० प्रतिशत हुनेछ ।
- पाठ्यक्रमको प्रथम तथा द्वितीय पत्रको विषयवस्तु एउटै हुनेछ ।
- प्रथम पत्र र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- प्रथम पत्रमा **Part (C) Service Specific Technical Subject** बाट मात्र यथासम्भव पाठ्यक्रममा भएका सबै पाठ्यांशहरूबाट निम्नानुसार प्रश्नहरू सोधिनेछ ।

Part (C) Service Specific Technical Subject	Weightage
Unit Contents	
1. Anatomy and physiology	10
2. History of anaesthesia	4
3. Basic science and instruments	10
4. Assessment of patients	6
5. Pharmacology and clinical practice of anaesthesia	70

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान
सेवा आयोग

प्राविधिक सेवा, प्राध्यापन समूह, एनेस्थेसियोलोजी उपसमूह, विभिन्न पदहरू (लेक्चरर/उप-प्राध्यापक/सह-प्राध्यापक/प्राध्यापक) को खुल्ला र आन्तरिक प्रतियोगितात्मक परिक्षाको पाठ्यक्रम

६. द्वितीय पत्रमा यथासम्भव निम्नानुसार प्रश्नहरू सोधिनेछ ।

Part	Weightage
(A) General Health Issues	30
(B) Service Specific General Subject	20
(C) Service Specific Technical Subject	50

७. द्वितीय पत्र/विषयका Part A, Part B र Part C को उत्तरपुस्तिकाहरू छुट्टाछुट्टै दिन सकिने छ । यदि उत्तरपुस्तिकाहरू छुट्टाछुट्टै दिएमा परिक्षार्थीले प्रत्येक भाग (Part) का प्रश्नहरूको उत्तर सोही भागको उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
८. यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
९. प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरू मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित हुन पाउनेछन् ।
१०. पाठ्यक्रम लागू मिति :- २०७०/१२/२१

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान
सेवा आयोग
प्राविधिक सेवा, प्राध्यापन समूह, एनेस्थेसियोलोजी उपसमूह, विभिन्न पदहरू (लेक्चरर/उप-प्राध्यापक/सह-
प्राध्यापक/प्राध्यापक) को खुल्ला र आन्तरिक प्रतियोगितात्मक परिक्षाको पाठ्यक्रम

Paper I & II: - General Health Issues and Service Specific

Part A: - General Health Issues

1. Present Constitution of Nepal (Health and Welfare issues)
2. Existing National Health Policy
3. Second long term health plan (1997-2017)
4. Health sector in present periodic plan
5. Prevailing health related Acts and Regulations
 - 5.1 Health Service Act
 - 5.2 Health Service Regulation
 - 5.3 Human Organ Transplant Act
 - 5.4 Kidney Transplant Regulation
 - 5.5 Nepal Medical Council Act
 - 5.6 Consumers Protection Act
6. International health agencies: Role and responsibilities of WHO, UNICEF, UNFPA and interagency relationships
7. Health and Human Right including Women's Right, Children's Right, Professional's Right, Client Right and Informed consent
8. Gender issues and health
9. Organization structure of Ministry of Health
10. Local governance and decentralization in health
11. Health institution development and management issues
12. Health manpower recruitment and development issues
13. Continuing medical education
14. National health training system
15. Indigenous & traditional faith healing & health practices
16. Supervision, types and its usage in Health Sector
17. Monitoring and Evaluation System in Health
18. Health Management Information System
19. Health insurance and financing in Health Care

Part B: - Service Specific General Subject

1. Drug act and regulation
2. Rational use of drugs
3. Prevailing national drug policy and importance of essential drug list
4. Anaesthesia Related Information
 - 4.1 History of Anaesthesia of Nepal
 - 4.2 Society of Anaesthesiologists of Nepal
 - 4.3 South Asian Confederation of Anaesthesiologists.
 - 4.4 World Federation of Societies of Anaesthesiologists

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान

सेवा आयोग

प्राविधिक सेवा, प्राध्यापन समूह, एनेस्थेसियोलोजी उपसमूह, विभिन्न पदहरू (लेक्चरर/उप-प्राध्यापक/सह-प्राध्यापक/प्राध्यापक) को खुल्ला र आन्तरिक प्रतियोगितात्मक परिक्षाको पाठ्यक्रम

5. Institutional management
6. Organization of faculty/ department
7. Financial planning
8. Principles of Medical Ethics and Medical Informatics
9. Evidence Based Medicine / Critical Appraisal of Scientific Literature
10. Principles of Research Methodology and Scientific Writing
11. Principles of Medical Education
12. Principle of Communication and Patient Counseling
13. Patient Safety
14. Breaking Bad News
15. Medical Audit
16. Epidemiology and Principle of Prevention and Control of Non-communicable Diseases
17. Information technology, Tele medicine etc.

Part C: - Service Specific Technical Subject

6. Anatomy and physiology

- 1.1 Anatomy of the airway
- 1.2 Anatomy of the spinal cord & nerve supply to the extremities
- 1.3 Neonatal physiology and anatomy
- 1.4 Central nervous system
 - 1.4.1 Resting membrane potential
 - 1.4.2 Neuro-muscular and synaptic transmission
 - 1.4.3 Receptors and transmitters
 - 1.4.4 Sensory perception and the pathways involved
 - 1.4.5 Factors affecting muscle tone
 - 1.4.6 Cerebrospinal fluid
- 1.5 Physiology of respiratory system
 - 1.5.1 Lung volumes and capacities measurement
 - 1.5.2 Clinical application
 - 1.5.3 Lung function tests
 - 1.5.4 Ventilation/perfusion ratios in the lung
 - 1.5.5 Control of respiration
 - 1.5.6 Effects of drugs
 - 1.5.7 Blood gas transport
 - 1.5.8 Pulmonary circulation
 - 1.5.9 Physiology of lung mechanics, compliance, resistance, surfactant
- 1.6 Physiology cardiovascular system
 - 1.6.1 The cardiac cycle
 - 1.6.2 Instrumentation, the oscilloscope and ECG

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान

सेवा आयोग

प्राविधिक सेवा, प्राध्यापन समूह, एनेस्थेसियोलोजी उपसमूह, विभिन्न पदहरू (लेक्चरर/उप-प्राध्यापक/सह-प्राध्यापक/प्राध्यापक) को खुल्ला र आन्तरिक प्रतियोगितात्मक परिक्षाको पाठ्यक्रम

- 1.6.3 Cardiac output and its measurement, blood pressure
- 1.6.4 Microcirculation
- 1.6.5 Control of the circulation
- 1.6.6 Ventricular function curve
- 1.6.7 Cardiac arrest
- 1.6.8 Cardiac pulmonary resuscitation
- 1.7 Renal physiology
 - 1.7.1 Renal blood flow
 - 1.7.2 Renal function tests
 - 1.7.3 Control of blood volume
 - 1.7.4 Water and electrolyte balance
 - 1.7.5 Renal influence on acid-base balance
 - 1.7.6 Haemodialysis (silent features)
 - 1.7.7 End stage renal failure
 - 1.7.8 Management of hyperkalima
- 1.8 Liver Physiology
 - 1.8.1 Liver perfusion and function
 - 1.8.2 Liver function tests
 - 1.8.3 Hematology
 - 1.8.3.1 Hemoglobin, normal and abnormal, clotting
 - 1.8.3.2 Blood transfusion
 - 1.8.3.3 Disseminated intravascular clotting
 - 1.8.3.4 Management of anticoagulation
- 7. History of anaesthesia**
 - 2.1 open to modern anaesthesia
 - 2.2 balanced anaesthesia
 - 2.3 dissociative anaesthesia and
 - 2.4 total intravenous anaesthesia
- 8. Basic science and instruments**
 - 3.1 Physics of pressure measurement, manometers and strain gauges and transduce
 - 3.2 Physics of flow, laminar and turbulent, viscosity and density
 - 3.3 Physics of heat
 - 1.8.4 Thermal conductivity in the body
 - 1.8.5 Sources of heat loss during anesthesia
 - 1.8.6 Methods of measuring temperature, thermostats and thermocouples
 - 1.8.7 Management of malignant hyperpyrexia
 - 3.4 Anaesthesia machines and circuits, respirometers and rotameters

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान

सेवा आयोग

प्राविधिक सेवा, प्राध्यापन समूह, एनेस्थेसियोलोजी उपसमूह, विभिन्न पदहरू (लेक्चरर/उप-प्राध्यापक/सह-प्राध्यापक/प्राध्यापक) को खुल्ला र आन्तरिक प्रतियोगितात्मक परिक्षाको पाठ्यक्रम

9. Assessment of patients, effects on choice and technique of anaesthesia, radiological assessment of lung disorders

10. Pharmacology and clinical practice of anaesthesia

- 2.1 Pharmacokinetics of anesthetic drugs, uptake, distribution, transport and drug binding, partition coefficients, pK and ionization, regional uptake, MAC, enzyme induction and drug elimination
- 2.2 Sedatives: Barbiturate and non-barbiturate hypnotic, common tranquilizers, premedication
- 2.3 Analgesics, Opioids and NSAIDs, and interaction with other drugs
- 2.4 Local anesthetics, methods of prolongation of action and effects and treatment of overdose
- 2.5 Drugs and the parasympathetic system, cholinergic and anti-cholinergic compounds
- 2.6 Drugs and the sympathetic system, sympathomimetic drugs alpha and beta-adrenergic compounds and their antagonist and effects of monoamine oxidase inhibitors,
- 2.7 Drugs used in the control of blood pressure, Ganglion blocking drugs, drugs acting on the peripheral sympathetic nerves, catecholamine synthesis and storage. and vascular smooth muscle relaxants.
- 2.8 Cardiac glycosides, digitalis and related compounds, onset and duration, factors modifying action, precipitating factors, toxicity
- 2.9 Inhalation anesthetic agents, Nitrous oxide, halothane ether, general properties and effects of other halogenated anesthetic agents
- 2.10 Vaporization and humidification, common vaporizers used in anesthesia
- 2.11 Intravenous induction agents, Thiopentone, Ketamine, diazepam, etc.
- 2.12 Narcoleptic agents
- 2.13 Histamine and antihistamines
- 2.14 Analeptic, complications of their use
- 2.15 Oxytocics and their interaction with inhalation anesthetics
- 2.16 Neuromuscular blocking agents, including abnormal responses and re-occurarisation.
- 2.17 Diuretics
- 2.18 Hormone therapy, insulin and its substitutes, steroids
- 2.19 Thyroid, anti thyroid drugs and management of thyroid crisis
- 2.20 Steroids, management of steroid supplement/ withdrawal therapy
- 2.21 Oxygen therapy and toxicity and the physics of the gas laws
- 2.22 Resuscitation, acid-base balance
- 2.23 Blood gases, pulse oximetry, capnography
- 2.24 Emergency Anaesthesia
- 2.25 Acute and chronic pain control

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान
सेवा आयोग

प्राविधिक सेवा, प्राध्यापन समूह, एनेस्थेसियोलोजी उपसमूह, विभिन्न पदहरू (लेक्चरर/उप-प्राध्यापक/सह-प्राध्यापक/प्राध्यापक) को खुल्ला र आन्तरिक प्रतियोगितात्मक परिक्षाको पाठ्यक्रम

- 2.26 Adrenal, pituitary, thyroid function
- 2.27 Control of blood sugar
- 2.28 Abnormalities of function
- 2.29 Anaesthesia in endocrine disease
- 2.30 Glycolysis, protein binding, fat utilization, stress and nutrition
- 2.31 Anaesthesia for general surgery
- 2.32 Paediatric and geriatric anaesthesia
- 2.33 Anaesthesia for head and neck surgery
- 2.34 Specialized anaesthesia :
 - 2.34.1 Obstetric
 - 2.34.2 Renal surgery
 - 2.34.3 Vascular/Transplant
 - 2.34.4 Trauma and burns
- 2.35 ICU organization, special problems
- 2.36 Foetal circulation, changes at birth, neonatal ventilation, neonatal and paediatric ICU problems
- 2.37 Anaesthesia for neonatal surgery
- 2.38 Anaesthesia outside the operating theatre
- 2.39 Drugs used in control of blood pressure
- 2.40 Clinical trials, use and misuse of statistics

--- The end ---