सुदूरपश्चिम प्रदेश

प्रदेश निजामती सेवा र स्थानीय सरकारी सेवा अन्तरगत स्वास्थ्य सेवा, एनेष्थेसियोलोजी समूह, नवौं तह वा सो सरह पदको खुला, अन्तर तह र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

यस पाठ्यक्रम योजनालाई निम्न अनुसार दुई चरणमा विभाजन गरिएको छ :

प्रथम चरण (First Phase) : लिखित परीक्षा (Written Examination)

द्वितीय चरण (Second Phase): अन्तरवार्ता (Interview)

पूर्णांक : २००

पूर्णांक : २५

पूर्णांक : २००

परीक्षा योजना (Examination Scheme)

प्रथम चरण: लिखित परीक्षा (Written Examination)

| पत्र | विषय | खण्ड | पूर्णांक | उतीर्णांक | परीक्षा प्रणाली | | प्रश्न संख्या ×अंक | समय |
|---------|---------------------|---------------------------------|----------|-----------|-----------------|-----------------------------|--------------------|-----------|
| प्रथम | General Subjects | (ক) | 50 | 40 | Subjective | Short Answer | 6 x 5 | 3.00 hrs. |
| | | Management | | | | Long Answer | 2 x 10 | |
| | | (ख) General Health Issues | 50 | | Subjective | Short Answer Long Answer | 4 x 5 3 x 10 | |
| द्वितीय | Technical Subject | | 100 | 40 | Subjective | Critical Analysis | 4 x 15 | 3.00 hrs. |
| | | | | | Subjective | Problem Solving | 2 x 20 | |

द्वितीय चरण : अन्तरवार्ता (Interview) पूर्णांक : २५

द्रष्टव्य :

- १. लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुबै हुन सक्नेछ।
- २. स्वास्थ्य सेवा अन्तरगतका सबै समूह/सबै उपसमूहहरुको लागि <u>प्रथम पत्र</u> को पाठ्यक्रमको विषयवस्तु एउटै हुनेछ। तर <u>द्वितीय</u> <u>पत्र</u> Technical Subject को पाठ्यक्रम समूह/उपसमूह अनुरुप फरक फरक हुनेछ।
- ३. प्रथम पत्र को लिखित परीक्षा समूह/उपसमूहहरुका लागि संयुक्त रुपमा एउटै प्रश्नपत्रबाट एकैदिन वा छुट्टाछुट्टै प्रश्नपत्रबाट छुट्टाछुट्टै दिन पनि हुन सक्नेछ। तर द्वितीय पत्र को परीक्षा समूह/उपसमूह अनुसार अलग अलग दिन छुट्टाछुट्टै प्रश्नपत्रबाट हुनेछ।
- ४. प्रथम पत्रको खण्ड (क) र खण्ड (ख) को लागि छुट्टाछुट्टै उत्तरपुस्तिका हुनेछन । (खण्ड क को लागि एउटा र खण्ड ख को लागि एउटा) भने द्वितीय पत्रको लागि प्रत्येक प्रश्नका उत्तरपुस्तिकाहरु छुट्टाछुट्टै हुनेछन् ।
- ५. यस पाठ्यक्रममा जे सुकै लेखिएको भएता पनि पाठ्यक्रममा परेका ऐन, नियम तथा नीतिहरु परीक्षाको मिति भन्दा ३ महिना अगाडि संसोधन भएका वा संशोधित भई कायम रहेका वा थप गरी संशोशित भई कायम रहेका लाई यस पाठ्यक्रममा परेको सम्झन् पर्दछ।
- ६. प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र द्वितीय चरणको अन्तरवार्तामा सम्मिलित गराइने छ।
- ७. पाठ्यक्रम लागु मिति : २०८१।१०।२४ गते देखि ।

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স্থদ पत्र : General Subject (Management and General Health issues)

खण्ड – (क) : 50 Marks

(Management)

- 1. Management: concept, principles, functions, scope, role, level and skills of managers
- 2. Hospital management
- 3. Participative management : concept, advantages and disadvantages, techniques of participation
- 4. Time management: concept, advantages, and disadvantages
- 5. Conflict management: concept, approaches to conflict, levels of conflict, causes of conflict and strategies for conflict management, Negotiation skills
- 6. Stress management : concept, causes and sources of stress, techniques of stress management
- 7. Appreciative inquiry: concept, basic principles and management
- 8. Human resource management: concept, functions and different aspects, HRM strategy
- 9. Planning: concept, principles, nature, types, instrument and steps, logical framework
- 10. Financial management : concept, approaches, budget formulation and implementation, auditing and topics related to fiscal management, procurement, supply chain management, e-LMIS
- 11. Leadership : concept, functions, leadership styles, leadership and management effectiveness
- 12. Coordination : concept, need, types, techniques, and approaches of effective coordination
- 13. Communication : concept, communication process and barrier to effective Communication, techniques for improving communication
- 14. Health manpower recruitment and development
- 15. Organizational structure of Federal, provincial health related ministry
- 16. Governance: Good governance system in Health Sector
- 17. Health system, WHO Six Building blocks
- 18. Sudurpashchim Province Civil Service Act and Regulation
- 19. Procurement Act, 2063 & Sudurpashchim Pradesh Procurement Regulation, 2078
- 20. Sudurpashchim Pradesh Good Governance Act, 2075

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> खण्ड – (ख) : 50 Marks (General Health Issues)

- 1. The Constitution of Nepal (health and welfare issues)
- 2. National and Provincial Health Policy and Public Health Act
- 3. Health Sector in current 5 year Sudurpashchim provincial plan
- 4. Health Services Act 2053, Health Service Regulation, 2055
- 5. International Health Agencies: multilateral, bilateral, NGOs/INGOs working in Sudurpashchim province
- 6. Health related Professional Council and related regulations
- 7. Medical ethics in general and its application
- 8. Indigenous and traditional faith healing and health mal-practices in context of Sudurpashchim Province
- 9. Supervision, types and its usage in health sector
- 10. Monitoring and evaluation system in health sector
- 11. Health Management Information System
- 12. Social Health insurance, health care financing and concept of co-payment
- 13. Importance of water, sanitation and hygiene in public health
- 14. Disaster and emergency management in health sector, HOPE
- 15. Effect of environment in public health: air pollution, water pollution, soil and noise pollution
- 16. FCHVs involvement in health service delivery
- 17. Community involvement in health service delivery
- 18. Counseling: concept, type, importance and its application in health service delivery
- 19. Cross cutting issues: GESI, Climate change, health in all policy

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द्वितीय पत्र: Technical Subject

A. Clinical Practice of Anaesthesia (Including relevant basic sciences)

- 1. Anatomy related to:
 - 1.1. Diaphragm, upper and lower airway
 - 1.2. Regional anaesthesia, field block, central neuraxial, blockade, block for acute pain states
 - 1.3. Intramuscular injections, arterial and venous cannulations and positioning.
- 2. History of anaesthesia. From open to modern anaesthesia, balanced anaesthesia, dissociative anaesthesia and total intravenous anaesthesia.
- 3. Principles of physics and use of equipment in anaesthesia, including:
 - 3.1. Anaesthesia machine checking the machine and assembly of necessary items.
 - 3.2. Airway equipment for airway management- mask, LMA, fibreoptic laryngoscopes; other devices like Combi tube etc.
 - 3.3. Breathing systems continuous flow systems, draw over system Assembly and checking.
 - 3.4. Monitoring in anaesthesia with concepts of minimal monitoring.
 - 3.5. Safety in anaesthesia.
 - 3.6. Gas laws, storage and supply of medical gases
- 4. Physiology and biochemistry (normal and pathological):
 - 4.1. Respiratory, cardiovascular and neurophysiology, renal and hepatic physiology and endocrinology.
 - 4.2. Physiology of pregnancy, childhood, aging, coagulation and acid-base regulation. Physiological measurement: measurement of physiological variables such as blood pressure, cardiac output, lung function, renal function, hepatic function, blood-gas-analysis, coagulation etc.
 - 4.3. Physiology of lung mechanics, compliance, resistance, surfactant.
 - 4.4. Properties of liquids, gases and vapours. Physical laws governing gases and liquids as applied to anaesthetic equipment such as pressure gauges, pressure regulators, flowmeters, vaporisers and breathing systems. Relevant electricity, optics, spectrophotometry, and temperature measurement together with an understanding of the principles of commonly used anaesthetic and monitoring equipment. Electrical, fire and explosion hazards in the operating room.
 - 4.5. Fluid balance, Acid base homeostasis in health and diseases.
 - 4.6. Physiology of Tourniquet applications
- Basic principles of drug action. Principles of pharmacokinetics and pharmacodynamics, receptor drug interaction, physicochemical properties of drugs and their formulations, drug actions and drug toxicity.

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- 6. Preoperative assessment of the patient, their presenting condition and any intercurrent disease. Interpretation of relevant medical images (e.g., X-rays, ECGs, ultrasound, PET scan, MRI...), lung function tests, cardiac catheterisation data and biochemical results. Use of scoring systems (e.g., ASA grading).
- 7. Pharmacology of drugs used, especially in anaesthesia and in internal medicine.
 - 7.1. Pharmacology of intravenous induction agents.
 - 7.2. Inhalation anaesthetic agents. Vaporisers and humidification.
 - 7.3. Pharmacology of analgesics and opioids.
 - 7.4. Neuromuscular blocking agents. Abnormal responses, pharmacogenetics.
 - 7.5. Pharmacology of local anaesthetic drugs. Nerve blocks. Epidural and spinal anaesthesia
 - 7.6. Drugs and the autonomic nervous system.
 - 7.7. Drugs used in control of blood pressure.
 - 7.8. Oxygen therapy and toxicity.
- 8. Commonly used anaesthetic techniques of general and regional anaesthesia viz.
 - 8.1. GA Intravenous, Inhalational, Endotracheal etc. using spontaneous and controlled mode of ventilation.
 - 8.2. RA Spinal, epidural and local, peripheral nerve block, plexus block, paravertebral block
- 9. Resuscitation and emergency medicine
 - 9.1. Cardiopulmonary resuscitation. Techniques of Basic Life Support (BLS) and Advanced Life Support (ALS).
 - 9.2. Emergency medicine. Prehospital care. Immediate care of patient with medical or surgical emergency including trauma.
- 10. Administration of and indications for crystalloids and colloids including blood and blood products, massive blood transfusion
- 11. Management of biochemical disturbances such as acid base imbalance, diabetic keto-acidosis, hyperosmolar syndrome and acute poisoning.
- 12. Statistics. Basic principles of data handling, probability theory, population distribution and the application of both parametric and non-parametric tests of significance. Research methodology and clinical trials.
- 13. Airway assessment methods and tools

B. Clinical Practice of Anaesthesia (Combined with relevant basic sciences):

- 1. Adrenal, pituitary, thyroid function. Control of blood sugar. Abnormalities of function. Anaesthesia in endocrine disease.
- 2. Glycolysis, protein binding, fat utilization, Stress, Nutrition.

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- 3. Shock, types, pathogenesis and management of patients in shock, renal failure, critically ill and/or on ventilator
- 4. Acute and chronic pain control.
- 5. Anaesthesia for general surgery.
- 6. Obstetric anaesthesia / gynaecological surgery.
- 7. Paediatric anaesthesia.
- 8. Geriatric anaesthesia.
- 9. Anaesthesia for thoracic surgery.
- 10. Anaesthesia for neurosurgery. Cerebral blood flow and regulating factors.
- 11. Anaesthesia for vascular surgery.
- 12. Anaesthesia for trauma and orthopaedics.
- 13. Anaesthesia for burns and plastic
- 14. Anaesthesia for head and neck surgery.
- 15. Diagnosis and principles of management of patients admitted to a general intensive care unit with both acute surgical and medical conditions.
 - 15.1. Use of assessment and prognostic scoring systems.
 - 15.2. Management of circulatory and respiratory insufficiency including artificial ventilation.
 - 15.3. Management of infection, sepsis and use of antimicrobial agents.
 - 15.4. Principles of ethical decision-making
- 16. Special anaesthetic techniques as relevant to:
 - 16.1. Outpatient anaesthesia, hypotensive anaesthesia, anaesthesia in abnormal environments including rural area and calamitous situations
 - 16.2. Associated medical disorders in surgical patients
 - 16.3. Non-operating room aesthetic (NORA)
 - 16.4. Anaesthesia in haematological disorders (Sickle cell anaemia, thalassemia) and anaesthetic considerations
 - 16.5. Anaesthesia for urological surgery

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