लोक सेवा आयोग

नेपाल स्वास्थ्य सेवा, सर्जरी समूह, न्यूरोसर्जरी उपसमूह, नवौं (९) तहको खुला र आन्तरिक प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

Paper II: Technical subject

1. Basic Sciences

1.1. Anatomy

1.1.1. Anatomy of brain and spinal cord

1.1.2. Anatomy of scalp and skull

1.1.3. Anatomy of spine

1.1.4. Embryology of the nervous system

1.1.5. Classification of nervous system

1.2. Physiology

1.2.1. Physiology of CSF circulation

1.2.2. CSF

1.2.3. Pain mechanisms

1.3. Pathology and microbiology

1.3.1. Basic and gross histopathological characteristics of brain tumors

1.3.2. Organisms implicated in the CNS infections

1.3.3. Principle of frozen section

1.4. Pharmacology

1.4.1. Pharmacokinetics of antiepileptic drugs (AEDs)

1.4.2. Dosage of commonly used AEDs.

1.4.3. Use of mannitol / 3% sodium chloride and steroids in Neurosurgery

1.4.4. Antibiotics in neurosurgery

2. General Clinical Neurosurgery

2.1. History of neurosurgery

2.2. Fluid, Electrolytes and Nutrition

2.3. General Critical Care

2.4. Preoperative and Postoperative Care

2.5. General principle of operative exposure in neurosurgery

2.6. Management of Infection

2.7. Basic Neuroanesthesiology

2.8. Basic Neuroradiology

3. Principles of Trauma Care

3.1. Pathophysiologyof traumatic brain injury

3.2. Head Injury- Operative and Non-operative Management

3.3. Spinal Injury- Operative and Non-operative Management

3.4. Guidelines for management of neuro trauma

4. Cerebrovascular Surgery

4.1. Subarachnoid Hemorrhage (SAH)pre and postoperative management

4.2. Principles of Aneurysm and Arteriovenous Malformations (AVM) surgery

4.3. Spontaneous Intracerebral Hemorrhage (ICH) and Intraspinal Hemorrhage

4.4. Occlusive cerebrovascular disease

5. Neurosurgical Oncology

5.1. Investigations for Brain Tumors

5.2. Surgery for Brain Tumors

5.3. Principles of Chemo- and Radiotherapy

5.4. Sellar and parasellar tumors

5.5. Orbital tumors

5.6. Management of Spinal tumors (Intra and extramedullary)

6. Pediatric Neurosurgery

6.1. Hydrocephalus

6.2. Neural Tube Defects (NTD)

6.3. Chiari malformations

6.4. Dandy Walker malformations

7. Surgery of the Peripheral Nervous System

7.1. Management of Peripheral Nerve Injury

7.2. Carpal Tunnel Syndrome and Other Entrapment Neuropathies

7.3. Principles of Electromyography/Nerve Conduction Studies (EMG/NCT)

8. Spinal Surgery

8.1. Disc Herniations

8.2. Spinal Stenosis

8.3. Myelopathy

8.4. Spinal Exposures and instrumentation

9. Stereotactic and Functional Neurosurgery

9.1. Principles of Stereotactic and Functional Neurosurgery

9.2. Surgical therapy of movement disorders and epilepsy

10. Infections

10.1. Antimicrobial use

10.2. Acute bacterial meningitis

10.3. Parasitic and fungal infections

10.4. Principle of management of brain / spinal abscesses and empyemas

11. Pain

11.1. Management of Craniofacial pain syndromes

12. Recent advances in neurosurgery
