FINAL EXAM
DECEMBER 2011

NATIONAL BOARD OF EXAMINATIONS

NEUROSURGERY (PART 2 / FINAL)

PAPER- I

Time : 3 hours **NS2/D/11/21/I**
Max. Marks : 100

Attempt all questions in order.
Each question carries 10 marks.

1.	a. Describe regulation of normal cerebral blood flow. b. Describe the factors that affect the cerebral blood flow.	5+5
2.	a. Describe anatomy of blood brain barrier. b. Discuss blood brain barrier in health and in diseases.	6+4
3.	a. Describe anatomy of median longitudinal fasciculus (MLF). b. Discuss the basis of inter-nuclear Ophthalmoplegia.	4+6
4.	a. Describe various parasitic infestations of central nervous system. b. Discuss different treatment options in managing neurocysticercosis.	5+5
5.	a. Discuss development of Neural tube. b. Describe the embryological basis of various neural tube defects.	4+6
6.	a. Describe physiology of normal respiration. b. Discuss various respiratory patterns in a head-injured patient.	4+6
7.	Describe etiology and patho-physiology of epileptogenesis.	10
8.	a. Describe anatomy of limbic system and draw a labeled diagram. b. Discuss basis of psychosurgery.	6+4
9.	a. Describe pathogenesis of brain abscess. b. Discuss neonatal brain abscesses.	6+4
10.	a. Describe WHO classification of brain tumors. b. Discuss pathology of vaso-formative brain tumors.	7+3

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PAPER- II

Time : 3 hours **NS2/D/11/21/II**
Max. Marks : 100

Attempt all questions in order.
Each question carries 10 marks.

1. a. Describe the basis of M.R. Imaging. 4+6
   b. Describe various imaging modalities in evaluation of intracranial aneurysms with their sensitivity and specificity.

2. a. Describe clinical features and evaluation of a female with L_5 - S_1 spondylolisthesis. 4+6
   b. Discuss management option in such a patient.

3. a. Describe clinical features of aneurysm of vein of Galen. 4+6
   b. Discuss management of a vein of Galen malformation in a child.

4. a. Describe various grading system for subarachnoid hemorrhage with their limitations. 5+5
   b. Discuss management of poor grade subarachnoid hemorrhage.

5. Discuss pathology, clinical features and management options for craniopharyngioma. 10

6. Describe management of a patient with post-traumatic acute subdural haematoma. 10

7. a. What is evidence based neurosurgery? 3+7
   b. Discuss evidence based management of Acoustic Neurinoma.

8. a. Describe briefly various intra-fourth ventricular tumors. 3+7
   b. Discuss management of oligodendrogliomas and central neurocytomas.

9. a. Describe encephaloceles. Discuss management of anterior encephaloceles. 7+3
   b. Describe embryology of anterior encephaloceles.

10. a. Discuss causes of unilateral Foot Drop. 4+6
    b. Describe management of Arnold-Chiari malformation.

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PAPER- III

Time : 3 hours **NS2/D/11/21/III**
Max. Marks : 100

Attempt all questions in order.
Each question carries 10 marks.

1. a. Classify cranio-synostosis. 4+6
   b. Discuss management of unilateral coronal craniosynostosis.

2. a. Discuss the current management of medulloblastoma. 6+4
   b. Discuss the controversies in radio-therapy for these lesions.

3. a. Discuss the mode of action of Radio-surgery. 5+5
   b. Discuss role of Radio-surgery for benign brain lesions.

4. a. Discuss different techniques of inter-vertebral body fusion. 6+4
   b. Discuss artificial discs.

5. a. Describe patho-physiology and natural history of cerebral vascular malformation. 5+5
   b. Discuss treatment options for cerebral cavernomas.

6. a. Describe current understanding of cerebral vasospasm following sub-arachnoid hemorrhage. 6+4
   b. Describe endovascular procedures for carotid artery stenosis.

7. a. Discuss applications of neuro-navigation in Neurosurgery. 6+4
   b. Discuss functional neuro-navigation.

8. a. Discuss the current mechanism of hydrocephalus in adult. 5+5
   b. Describe Slit-Ventricle Syndrome.

9. a. Describe preventive Neurosurgery. 3+7
   b. Discuss management of incidental aneurysm.

10. a. Describe current application of deep brain stimulation. 6+4
    b. Discuss basis of deep brain stimulation in Parkinsonism.

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