

QP Code:104505

Reg. No.:.....

**M.Ch. (Neuro Surgery) Degree Regular/Supplementary Examinations
December 2025**

Paper IV – Recent Advances

Time: 3 hrs

Max marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essay: (20)

1. Elaborate on the advancements in genetic and molecular diagnostics in neurosurgical oncology and their impact on patient management.

Short essays: (8x10=80)

2. Neuronavigation in brain and spine surgery.
3. Explain the use of 3D printing technologies in surgical planning, cranial reconstruction, and resident training in neurosurgery.
4. Exoscope.
5. Trans cranial doppler and its uses in neurosurgery.
6. Robotics in Neurosurgery.
7. Optic nerve sheath diameter and its relevance to neurosurgery.
8. Neuromodulation devices.
9. Outline recent developments in endovascular treatment of cerebral aneurysms.
