

**NEUROSURGERY**

PAPER-I

Time: 3 hours  
Max. Marks:100

NS 2/J/19/21/I

**Important Instructions:**

- *Attempt all questions in order.*
- *Each question carries 10 marks.*
- *Read the question carefully and answer to the point neatly and legibly.*
- *Do not leave any blank pages between two answers.*
- *Indicate the question number correctly for the answer in the margin space.*
- *Answer all the parts of a single question together.*
- *Start the answer to a question on a fresh page or leave adequate space between two answers.*
- *Draw table/diagrams/flowcharts wherever appropriate.*

**Write short notes on:**

1. Intra-operative monitoring: 3+3+4
  - a) Somato-sensory evoked potentials.
  - b) Motor evoked potentials.
  - c) Brain-stem auditory evoked potentials.
2. Intra-cranial pressure: 3+3+4
  - a) Monro-Kellie doctrine.
  - b) Volume-Pressure Relationship.
  - c) Intra-cranial pressure monitoring.
3. Diffuse axonal injury: 3+3+4
  - a) Pathophysiology
  - b) Diagnostic studies
  - c) Management
4. Fat embolism: 3+3+4
  - a) Pathophysiology.
  - b) Diagnostic studies.
  - c) Management.
5. Hyponatremia: 4+3+3
  - a) Etiopathogenesis.
  - b) Cerebral salt wasting syndrome.
  - c) SIADH.
6. Whiplash injury: 3+3+4
  - a) Mechanism and pathology.
  - b) Clinical profile.
  - c) Imaging and management.

**P.T.O.**

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| 7.  | Post traumatic epilepsy:                                 | 3+4+3 |
|     | a) Classification.                                       |       |
|     | b) Management.   |       |
|     | c) Prognosis.  |       |
| 8.  | Critical care:   | 5+5   |
|     | a) ICP monitoring.                                       |       |
|     | b) Ventilation parameters.                               |       |
| 9.  | Tumours of the spinal cord:                              | 3+4+3 |
|     | a) Pathophysiology of cord compression.                  |       |
|     | b) Differences between extra and intramedullary tumours. |       |
|     | c) Functional scores in spinal cord disease              |       |
| 10. | Regarding cerebral edema:                                | 3+3+4 |
|     | a) Blood-brain barrier.                                  |       |
|     | b) Aquaporins in the brain.                              |       |
|     | c) Brain tumours and edema.                              |       |

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