

NEURO ANAESTHESIA**PAPER-I**Time: 3 hours
Max. Marks:100

N.ANS/D/20/94/I

Important Instructions:

- **You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.**
- **Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.**
- **No additional supplementary answer sheet booklet will be provided.**
- *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. Outline the indications for central venous cannulation in neurosurgical patients. Briefly mention the two common techniques and their complications. 5+5
2. Role of dexmedetomidine in neuroanaesthesia practice. 10
3. Discuss the cerebrospinal fluid dynamics. Briefly mention the effect of commonly used anaesthetic drugs on CSF. 8+2
4. Discuss the concept of cerebral autoregulation and carbon dioxide reactivity. Describe the intracranial pressure-volume relationship. 7+3
5. What is the rationale of hyperosmolar therapy in neuroanaesthesia? Compare Mannitol versus Hypertonic saline. 4+6
6. Elucidate the pharmacological effects of inhaled anaesthetics on cerebral blood flow, metabolism and autoregulation. 4+3+3
7. Describe the mechanism of injury following cerebral ischemia. Briefly outline the strategies for cerebral protection. 7+3
8. Enumerate the physiological changes in a pregnant patient and their clinical significance in a patient undergoing neurosurgical procedure. 7+3
9. Enumerate the various invasive techniques to measure intracranial pressure. 10
10. Discuss the principle and applications of cerebral oximetry/near-infrared spectroscopy (NIRS). Mention the limitations of NIRS. (3+4)+3
