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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JULY 2025**  
**PAPER I**

Wednesday, July 09, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ **Answer ALL questions.**
- ✍ **Answer to the point. Unnecessary padding of answers will be counterproductive.**
- ✍ **Draw diagrams wherever necessary.**

1. Define and classify dead space. What are the consequences of increases in dead space?
2. Describe in detail about hepatic blood flow. What are the factors affecting it?
3. Describe the role of magnesium in the body. Explain how magnesium is useful to the anaesthesiologist.
4. Write briefly about metabolic acid-base disorders.
5. Describe in detail how you would set up total intravenous anaesthesia with propofol. What precautions would you take during the procedure?
6. Explain why does desflurane require a dedicated vaporizer? Describe desflurane vaporizer.
7. Describe in detail about monitoring of neuromuscular blockade.
8. Draw a neat, labelled diagram of the ultrasound sonography of axillary brachial plexus block. Describe the technique.
9. Describe briefly how you would set up a ventilator to control mechanical ventilation of a man aged 35 years, with a weight of 70 kg and height of 170 cm. How and on what basis will you make changes in these initial settings?
10. Describe coronary circulation with a neat, labelled diagram. Enumerate the factors that affect myocardial oxygen supply and demand.

(10 marks × 10 = 100 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JULY 2025**  
**PAPER II**

Thursday, July 10, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Answer to the point. Unnecessary padding of answers will be counterproductive**

✍ **Draw diagrams wherever necessary.**

1. Classify hypertensive disorders of pregnancy. Discuss the anesthetic management of a patient with severe pre-eclampsia presenting for emergency cesarean section.  
(2+8=10 marks)
2. Draw a neat, labeled diagram to illustrate the fetal circulation. What are the circulatory changes that occur at birth.  
(5+5=10 marks)
3. Discuss assessment of pain in children and methods of providing pediatric post operative pain relief in urogenital surgeries.  
(5+5=10 marks)
4. Discuss the perioperative management of a 60-year-old patient with diabetic ketoacidosis presenting for an exploratory laparotomy for acute abdomen.  
(10 marks)
5. Enumerate the truncal regional nerve blocks in the abdomen. Discuss the Indications, technique and complications of erector spinae block.  
(4+6=10 marks)
6. Discuss the clinical manifestations of local anesthetic systemic toxicity and its management.  
(10 marks)
7. Describe the anatomy of epidural space with a neat, labelled diagram. Enumerate the different methods of identification of epidural space.  
(4+6=10 marks)
8. Classify major burns. A 36-year-old female with accidental 30% thermal burns six hours ago involving head and neck area with nasal hair singeing and in respiratory distress. Outline the initial assessment and plan of management.  
(2+8=10 marks)
9. Discuss the anesthetic management of a 3-year-old child with penetrating eye injury for an emergency repair.  
(10 marks)
10. Describe the anaesthetic management of 38-year-old multiparous lady with placenta percreta for elective cesarean section. Enumerate the role of uterotonics in the management of atonic postpartum haemorrhage.  
(10 marks)



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**MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JULY 2025**  
**PAPER III**

Friday, July 11, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Answer to the point. Unnecessary padding of answers will be counterproductive**

✍ **Draw diagrams wherever necessary.**

1. A 55-year-old smoker with adenocarcinoma of lung is posted for video assisted right lower lobectomy. Discuss the preoperative evaluation, preparation, intraoperative management of Video assisted thoracic surgery. (10 marks)
2. A 67-year-old male with history of Ischaemic heart disease underwent PTCA with drug eluting stent placed 6 months back is posted for laparoscopic inguinal hernia repair. Discuss anaesthetic management. (10 marks)
3. A 2-day neonate weighing 2.5 kgs with cervical meningocele is posted for repair. Discuss the perioperative anaesthetic management. (7+3= 10 marks)
4. A 16-year-old with adolescent idiopathic scoliosis is posted for posterior instrumentation with neuromonitoring. Describe the preoperative evaluation and anaesthetic management. Add a note on management of postoperative pain in this case. (8+ 2=10 marks)
5. A 6-year-old weighing 25kgs is posted for adenotonsillectomy. Discuss the anaesthetic management including post tonsillectomy bleed management. (10 marks)
6. 77-year-old with Ankylosing spondylitis and aortic regurgitation is posted for revision total hip replacement. Discuss the anaesthetic management. (8+2=10 marks)
7. Describe the anesthetic concerns and management of a CKD stage 5 patient posted for the creation of brachiocephalic AV fistula. (10 marks)
8. A 42-year-old male with BMI of 40 kg/m<sup>2</sup> is posted for laparoscopic sleeve gastrectomy. Describe perioperative anaesthetic management. (10 Marks)
9. 45 year old undergoing an upper limb orthopaedic procedure for second time under general anaesthesia. 10 minutes after induction with propofol, neuromuscular blockade with vecuronium and isoflurane as the inhalational anaesthetic patient was noted to have temperature of 41 degree Celsius, end tidal carbon dioxide showed persistent rise. Discuss the differential diagnosis and management. (2+8=10 marks)
10. Describe the anaesthetic management for posterior fossa tumour excision including the different positions used and complications of sitting position. (10 marks)



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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JULY 2025**  
**PAPER IV**

Saturday, July 12, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Answer to the point. Unnecessary padding of answers will be counterproductive**

✍ **Draw diagrams wherever necessary**

1. Describe the algorithm for pulseless ventricular tachycardia.  
(10 marks)
2. Describe the measures of post cardiac arrest care in a 30-year-old revived victim who sustained cardiac arrest due to hypovolemia.  
(10 marks)
3. Describe the pathophysiology and management of ARDS. Elucidate the newer strategies for mechanical ventilation in ARDS.  
(10 marks)
4. Describe the anaesthetic management for a Brain dead donor. Add a note on criteria for diagnosis of brain death.  
(10 marks)
5. Describe the clinical features and management of Paracetamol poisoning.  
(10 marks)
6. Describe the technique for stellate ganglion block, list its indications and complications.  
(10 marks)
7. Discuss the difficult airway algorithm for Pregnant women.  
(10 marks)
8. Discuss the concept of “opioid free anaesthesia”. Add a note on management of acute postoperative pain.  
(5+5= 10 marks)
9. What is massive blood transfusion? Discuss the approach to transfusion reactions and its management.  
(2+8 =10 marks)
10. Describe type I and type II errors. Add a note on Parametric and non-parametric tests.  
(10 marks)

