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MANIPAL ACADEMY OF HIGHER EDUCATION
MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JULY 2023

PAPER I

Monday, July 03, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long Essays:**

1. Describe the working principle of a pulse oximeter. What are the factors affecting the accuracy of a pulse oximeter?

(15 marks)

2. Describe the role of kidneys in regulation of acid-base balance.

(15 marks)

3. **Short Answer Questions:**

3A. Oxyhaemoglobin dissociation curve

3B. Brief note on blood supply to the liver and factors affecting it.

3C. Compare and contrast Sevoflurane and desflurane

3D. Compare and contrast cisatracurium and mivacurium

3E. Definition, clinical significance of volume of distribution

3F. Safety features in anaesthesia machine

3G. Flow Meter Assembly.

3H. Sodium bicarbonate

3I. Complications of Supraclavicular brachial plexus block.

3J. Anatomy of the sacral canal.

(7 marks × 10 = 70 marks)



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PAPER II

Tuesday, July 04, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ **Answer ALL the questions.**
- ✍ **Answer to the point as padding of answers will not fetch extra marks.**
- ✍ **Illustrate your answer with diagrams where appropriate.**

✍ **Long Essays:**

1. Describe pain pathway in labour. Explain pharmacological and nonpharmacological methods of labour analgesia.

(15 marks)

2. Discuss the anaesthetic management of a 45 year old lady with a BMI of 36 kg/m² scheduled for laparoscopic cholecystectomy.

(15 marks)

3. **Write short notes on:**

3A. Anaesthetic considerations in squint surgery

3B. Indications and contra-indications of one lung ventilation

3C. Factors affecting spinal spread of local anaesthetics

3D. Postoperative pain management for thoracotomy patients

3E. Clinical management of thyroid storm

3F. What are the precautions to be taken for laser surgeries. Write down a protocol for management of airway fire.

3G. Classify burns. Discuss fluid management of acute burns.

3H. Describe briefly anaesthetic management of perforating eye injury.

3I. Clinical tests to detect autonomic dysfunction

3J. Write briefly on the current recommendations regarding epidural catheter insertion and removal in patients receiving aspirin, clopidogrel and dabigatran

(7 marks × 10 = 70 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
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PAPER III

Wednesday, July 05, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Answer to the point as padding of answers will not fetch extra marks.**

✍ **Illustrate your answer with diagrams where appropriate.**

✍ **Essay Questions:**

1. Discuss the preoperative evaluation, intraoperative anaesthetic management and postoperative pain relief in a 65-year old lady with ischaemic heart disease scheduled for laparoscopic cholecystectomy.

(15 marks)

2. Discuss the preoperative preparation, intraoperative management and postoperative care of a 50-year old patient with a malignancy of right upper lobe of lung posted for pneumonectomy.

(15 marks)

3. **Write briefly on:**

3A. Complications of use of bone cement in hip replacement arthroplasty and its management

3B. Anaesthetic considerations in cervical spine trauma

3C. Diagnosis and management of TURP syndrome

3D. Principles of perioperative fluid management in the recipient of a renal transplant

3E. Anaesthetic management of a 1-day old child scheduled for pyloromyotomy

3F. Anaesthetic management of a neonate with congenital diaphragmatic hernia

3G. Intraoperative management of a 16-month old child with a patent foramen ovale and left-to-right shunt scheduled for left inguinal hernioplasty

3H. Current guidelines regarding anaesthesia in a child with a recent upper respiratory tract infection

3I. Enumerate the major respiratory complications that may occur in postanesthesia care unit and their management

3J. Anaesthetic concerns in the management of an adult patient posted for MRI of lumbosacral spine

(7 marks × 10 = 70 marks)



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PAPER IV

Thursday, July 06, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ **Answer ALL the questions.**
- ✍ **Illustrate your answer with diagrams where appropriate**
- ✍ **Answer to the point as padding of answers will not fetch extra marks**

✍ **Long Essay:**

1. Explain in detail how you would plan Total Parenteral Nutrition for an adult patient with sepsis in the intensive care unit. (15 marks)

2. Explain the term 'triage'. Explain the current concepts of resuscitation of a trauma victim with head injury. (15 marks)

3. **Write short notes on:**

- 3A. Resuscitation of an adult with near-drowning
- 3B. Anaesthetic implications of Wolff Parkinson White syndrome
- 3C. Management of Paracetamol poisoning
- 3D. Dual mode of ventilation
- 3E. Gate control theory of pain
- 3F. Assessment of difficult airway
- 3G. Monitoring depth of anesthesia
- 3H. Student's t test
- 3I. Phantom limb pain
- 3J. Prone ventilation

(7 marks × 10 = 70 marks)

