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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JUNE 2020**  
**SUBJECT: PAPER I: BASIC SCIENCES AS APPLIED TO ANAESTHESIOLOGY**

Wednesday, June 03, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

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✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Draw a neat labeled diagram of the anatomy of the brachial plexus. Describe the technique of supraclavicular approach of brachial plexus block.

(15 marks)

2. Enumerate and classify the Oxygen delivery devices. Describe the Venturi principle. Give a few examples of its uses in anaesthesia.

(15marks)

3. **Write short notes on:**

3A. Discuss in detail Flow meter assembly.

3B. Minimum Alveolar Concentration

3C. End tidal carbon dioxide monitoring

3D. Physiological changes in cardiovascular and respiratory system during pregnancy

3E. Discuss the methods to measure depth of anaesthesia.

3F. Mention the tests of coagulation.

3G. Role of Magnesium sulphate

3H. Discuss in detail Internal jugular vein cannulation.

3I. Volume of distribution

3J. Discuss Innervation of the larynx with the help of neat diagram.

(7 marks × 10 = 70 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION****MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JUNE 2020****SUBJECT: PAPER II: ANAESTHESIA IN RELATION TO ASSOCIATE SYSTEMIC DISEASES**

Thursday, June 04, 2020

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. A 38-year old multiparous lady presents at 37 weeks gestation with painless vaginal bleeding. Her blood pressure is 80/40 mmHg, heart rate is 130 beats/min and haemoglobin is 8.5 gm/dL. Discuss the anaesthetic management of this lady scheduled for emergency caesarean delivery.

(15 marks)

2. A 60-year old man, known hypertensive on Tab Losartan 25 mg daily for the past 3 years, sustains open fracture of both bones of the forearm. He has had his lunch 4 hours prior. Discuss the perioperative management of this patient scheduled for emergency debridement.

(15 marks)

**3. Write briefly on:**

- 3A. Apgar score
- 3B. “Walking epidural” (in the context of labour analgesia)
- 3C. Gate control theory of pain
- 3D. Anaesthetic uses of clonidine
- 3E. Routes of administration of morphine (with doses) for postoperative pain
- 3F. Assessment of pain in children
- 3G. Anaesthetic concerns in a patient with hypothyroidism
- 3H. Anaesthetic implications of lithium therapy
- 3I. Laserflex tube
- 3J. Complications of regional blocks for ophthalmic surgery

(7 marks × 10 = 70 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JUNE 2020**  
**SUBJECT: PAPER III: ANAESTHESIA IN RELATION TO SUB SPECIALITIES**

Friday, June 05, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ **Answer ALL the questions.**
- ✍ **Draw diagrams where appropriate.**

✍ **Long Essay:**

1. Describe the pre-operative evaluation, preparation and management of a 60 year old female with coronary artery disease with drug eluting stent placed 2 months back now posted for a right total hip replacement.

(15 marks)

2. Enumerate various positions used for surgical approach to posterior fossa tumors. Perioperative management of a case of posterior fossa tumor and complications associated with sitting position.

(15 marks)

3. **Write short notes on:**

- 3A. Anesthetic implications in managing a 2 year old child with left to right shunt cardiac shunt (Ventricular Septal Defect).
- 3B. Discuss the preoperative preparation required while providing anesthesia for a chronic smoker posted for laparoscopic cholecystectomy.
- 3C. Anaesthetic concerns in MRI suite.
- 3D. Preoperative preparation required in managing a sixty year old patient posted for robotic surgery for prostatectomy.
- 3E. Indications for one lung ventilation.
- 3F. Discuss the anesthetic concerns in a one week old infant with hydrocephalus posted for shunt surgery.
- 3G. Criteria for discharge after day care/ambulatory surgery.
- 3H. Intravenous fluid management in a one year old child weighing 10 kg posted for intra-abdominal cyst excision.
- 3I. Discuss the techniques of renal replacement therapy.
- 3J. Discuss in brief the management of one day old neonate posted for correction of omphalocele.

(7 marks × 10 = 70 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MD (ANAESTHESIOLOGY) DEGREE EXAMINATION – JUNE 2020**  
**SUBJECT: PAPER IV: INTENSIVE CARE MEDICINE, PAIN MEDICINE AND**  
**RECENT ADVANCES**

Saturday, June 06, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ **Answer ALL the questions.**  
✍ **Draw diagrams where appropriate.**

✍ **Long Essay:**

1. What is Berlin's definition of Acute Respiratory Distress Syndrome (ARDS)? Mention the etiopathogenesis for ARDS. Severity classification and ICU management of a case of ARDS.  
(15 marks)

2. What is the International Association for Study of Pain (IASP) definition of pain? Classify pain. Interdisciplinary management of pain and classify various pharmacological agents for pain relief.  
(15 marks)

3. **Write short notes on:**

- 3A. Emergency room management of tension pneumothorax.  
3B. What is sensitivity, specificity of a diagnostic investigation?  
3C. Indications for fresh frozen plasma  
3D. How will you manage a patient in post cardiac arrest status with return of spontaneous circulation?  
3E. Role of PT, APTT in clinical practice  
3F. What is the role of "simulation" for training and evaluation of Anesthesia residents?  
3G. Technique of percutaneous dilatational tracheostomy  
3H. Advantages and disadvantages of pressure support ventilation (PSV)  
3I. Management of organophosphorus poisoning  
3J. How would you prescribe total parenteral nutrition (TPN) to a 60 kg patient in the ICU?  
(7 marks × 10 = 70 marks)

