

## MANIPAL ACADEMY OF HIGHER EDUCATION

## PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION – OCTOBER 2019

SUBJECT: PAPER I: BASIC SCIENCES AS APPLIED TO ANAESTHESIOLOGY: ANATOMY, PHYSIOLOGY, PHARMACOLOGY AND BIOCHEMISTRY, ETHICS, QUALITY ASSURANCE, MEDICOLEGAL ASPECTS

Tuesday, October 08, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ Answer ALL the questions.

☞ Essay questions:

1. What is cerebral autoregulation? Enumerate the factors regulating cerebral blood flow. Discuss the implications of various inhalational anaesthetic agents on cerebral autoregulation. (15 marks)

2. What is the nerve supply to the cricothyroid muscle? Enumerate the sensory innervation of the larynx? Draw labelled outline diagram of vocal cord position in unilateral and bilateral recurrent laryngeal nerve palsy (15 marks)

3. Write short notes on:

3A. What is Venturi principle? Discuss its applications in anaesthesia practice.

3B. What are the measures by which you can measure the depth of anaesthesia during the intra operative period?

3C. What are the determinants of cardiac output and discuss various non-invasive methods of measurement of cardiac output?

3D. Discuss the distribution of ventilation and perfusion in a normal lung with the help of a labelled diagram. What are the factors affecting ventilation perfusion ratio?

3E. What is capnography? Draw a neat labelled diagram of a normal capnograph. Discuss clinical considerations of capnography.

3F. Mechanism of action of local anaesthetic agents. Management of local anaesthetic toxicity.

3G. Discuss the counter current mechanism in the kidney. Discuss the renal protection strategies during preoperative period.

3H. Mention the intrathecal and epidural opioids in clinical practice and their complications.

3I. Total intravenous anesthesia (TIVA).

3J. Simulator in anaesthesia education.

(7 marks × 10 = 70 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION****PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION – OCTOBER 2019****SUBJECT: PAPER II: PRINCIPLES AND TECHNIQUES OF ANAESTHESIA  
INCLUDING REGIONAL ANAESTHESIA**

Wednesday, October 09, 2019

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.**

✍ **Essay questions:**

1. Describe the anaesthetic management of a pregnant mother with 20 weeks amenorrhoea posted for laparoscopic appendicectomy.

(15 marks)

2. A 65 year old man with a history of cigarette smoking since 40 years posted for resection of a left upper lobe tumour. Describe the preoperative evaluation, preparation and anaesthetic management of this patient.

(15 marks)

3. **Write briefly on:**

3A. Cerebral autoregulation

3B. Outline the anaesthetic management of a 8 year old child with post-tonsillectomy bleed.

3C. Postoperative nausea and vomiting. (PONV)

3D. Cardioplegia

3E. Anaesthetic considerations in a 4 week old infant posted for pyloromyotomy.

3F. Oculocardiac reflex

3G. Risk factors for difficult intubation.

3H. Complications of spinal anaesthesia.

3I. Technique, Indications and Complications of Sciatic nerve block. (any one approach)

3J. Detection and management of venous air embolism under general anaesthesia.

(7 marks × 10 = 70 marks)



Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION

PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION – OCTOBER 2019

SUBJECT: PAPER III: ANAESTHESIA IN RELATION TO ASSOCIATED SYSTEMIC DISEASES, INTENSIVE CARE MEDICINE, PAIN MEDICINE

Thursday, October 10, 2019

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.

✍ Essay questions:

1. Describe the preoperative preparation and anaesthetic considerations in a 80-year old male posted for total knee replacement.

(15 marks)

2. What are the recent guidelines for neonatal resuscitation? Write down the algorithm for resuscitation with drugs used.

(15 marks)

3. Write short notes on:

3A. Pain assessment tools in children

3B. Noninvasive ventilation in ICU

3C. Intra-aortic balloon pump – Indication, principles and complications

3D. Role of supraglottic airway devices in resuscitation

3E. Discharge criteria in day-care surgery

3F. Pre-emptive analgesia

3G. Malignant hyperthermia

3H. Synthetic oxygen carrying substances

3I. Criteria and tests for determining brain death

3J. Summary of Surviving Sepsis guidelines

(7 marks × 10 = 70 marks)

