

Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION

PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION – OCTOBER 2020

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

Monday, October 05, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer All Questions:**

✍ **Essay Questions:**

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

(15 marks)

2. Describe the arterial circulation of the heart with the aid of a diagram mentioning the unique features of coronary blood flow. Explain the Revised cardiac risk index and its importance to the anaesthetist.

(15 marks)

3. **Write short notes on:**

3A. Enumerate oxygen delivery devices. Describe Venturi principle diagrammatically.

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

3C. Clinical tests for evaluation of autonomic nervous system.

3D. Describe the Oxygen cascade, Oxygen transport and Oxygen dissociation curve.

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

3F. Discuss synthetic functions of the liver. What is the role of albumin in pharmacokinetics?

3G. Give the functional analysis, advantages and disadvantages of Bain circuit.

3H. Classify inotropes on the basis of their mechanism of actions. Compare dopamine and dobutamine.

3I. Mention the various clinical and confirmatory tests for brain death.

3J. Simulator in anaesthesia education.

(7 marks × 10 = 70 marks)



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PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION – OCTOBER 2020

SUBJECT: PAPER II: PRINCIPLES AND TECHNIQUES OF ANAESTHESIA INCLUDING REGIONAL ANAESTHESIA

Tuesday, October 06, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay questions:**

1. An 86-year-old patient is scheduled for open reduction and internal fixation of sub trochanteric fracture of femur. Discuss the preoperative evaluation and anaesthetic management of this patient.

(15 marks)

2. Discuss the preoperative evaluation of a 25-year-old man with OSA scheduled for laparotomy. How would you prepare him for surgery?

(15 marks)

3. **Write short notes on:**

3A. Pulmonary function changes following central neuraxial blockade.

3B. How will you anaesthetize the airway of a 40-year-old man for awake intubation?

3C. Enumerate the signs and symptoms of hyponatremia. Describe the management in a patient with serum sodium level of 115 mEq/L scheduled for knee replacement under RA.

3D. What is massive blood transfusion? What are the complications of massive blood transfusion?

3E. Cardioplegia and its role in cardiac anaesthesia practice.

3F. How do you diagnose HELLP syndrome? What is the role of the anaesthesiologist?

3G. Describe the preoperative evaluation and anaesthetic management of a four-year-old child with perforating eye injury scheduled for repair under GA.

3H. What principle is used in USG? How is USG useful in anaesthesia?

3I. Describe physiological changes associated with pneumoperitoneum for laparoscopic cholecystectomy.

3J. Anaesthetic management of laser surgery on tracheobronchial tract.

(7 marks × 10 = 70 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION**PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION – OCTOBER 2020****SUBJECT: PAPER III: ANAESTHESIA IN RELATION TO ASSOCIATED SYSTEMIC DISEASES, INTENSIVE CARE MEDICINE, PAIN MEDICINE**

Wednesday, October 07, 2020

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 Essays:

1. A 60 year old man, otherwise healthy is posted for total knee replacement. Discuss the plan for anaesthesia and postoperative pain relief.

(15 marks)

2. A 20 year old man presents to the emergency department following motor bike accident. He has altered sensorium, heart rate of 60/min, blood pressure of 88/40 mm Hg and has been shifted to the operation theatre for the drainage of an extradural haematoma. What are the anaesthetic concerns? Discuss your intraoperative management.

(15 marks)

3. Write short notes on:

- 3A. Inflammatory response to cardiopulmonary bypass
- 3B. Oxygen cascade
- 3C. How do you initiate total parenteral nutrition in a 50 year old patient with acute pancreatitis in ICU ?
- 3D. Anaesthetic implications of HIV
- 3E. Pre-emptive analgesia
- 3F. Advantages and disadvantages of Synchronized Intermittent Mandatory Ventilation. (SIMV)
- 3G. Percutaneous tracheostomy
- 3H. Treatment of supraventricular tachycardia
- 3I. Automated External Defibrillator (AED)
- 3J. Protocol for discharge criteria following day care surgery under anaesthesia.

(7 marks × 10 = 70 marks)

