Dog No		
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MANIPAL ACADEMY OF HIGHER EDUCATION

PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION - APRIL 2019

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

Tuesday, April 02, 2019

Time: 14:00 - 17:00 Hrs.

Max. Marks: 100

- Answer ALL the questions. Ø
- Answer to the point as padding of answers will not fetch extra marks. Ø
- Illustrate your answer with diagrams where appropriate. es
- With the help of a diagram, describe the anatomy of coronary circulation. How is the 1. coronary circulation regulated? Enumerate the physiological determinants of myocardial oxygen supply and consumption. (15 marks)

Describe with the help of a diagram, the anatomy of tracheobronchial tree. What positions 2. would the patient need to be placed to assist drainage of secretions from the posterior segment of the left upper lobe and apical segment of the right lower lobe?

(15 marks)

Write short notes on: 3.

- 3A. Describe the important features of obtaining informed consent for anaesthesia. Describe how does this process differ in:
 - Child i)
- Critically ill patient ii)
- 3B. Discuss the physicochemical properties of hydroxyethyl starch. Add a note on the current status of its perioperative use.
- 3C. What are the types of heat and moisture exchangers? What are its various uses, drawbacks and complications associated with it? Add a note on its safe use.
- 3D. Describe briefly toxic side effects of inhalational anaesthetic agents.
- 3E. Describe briefly <u>any one</u> technique of cannulating the subclavian vein. How would you choose between using the subclavian vein and internal jugular vein for central venous cannulation?
- 3F. Describe briefly the clinical importance of Cytochrome P 450 system.
- 3G. Describe any one technique of axillary brachial plexus block.
- 3H. Compare and contrast the physical properties and pharmacodynamics of halothane and isoflurane.
- What do you understand by the Pin index system? What are its uses, different configurations 3I. and how can one override the system to compromise safety?
- What are the anaesthetic implications of: 3J.
 - Lower oesophageal tone and i)
- Lower oesophageal motility? ii)

 $(7 \text{ marks} \times 10 = 70 \text{ marks})$

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MANIPAL ACADEMY OF HIGHER EDUCATION

PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION – APRIL 2019

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

Wednesday, April 03, 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.
- Z Illustrate your answer with diagrams where appropriate.
- 1. A 20 year old male had a pulse of 45/min and blood pressure of 190/110 mm Hg, diagnosed case of tumour mass in the posterior fossa. How will you prepare and manage the case for craniotomy and tumour excision.

(15 marks)

2. Enumerate the perioperative problems and anaesthetic management of a 28 year old patient with mitral stenosis for elective caesarian section.

(15 marks)

- 3. Write short notes on:
- 3A. A 2 year old child has come to the emergency department with a foreign body in the right bronchus. How will you manage anaesthesia for bronchoscopy in this patient?
- 3B. Describe with the help of a diagram, flow volume loops in:
 - i) Healthy adult
 - ii) Patient with restrictive lung disease and
 - iii) Patient with obstructive lung disease
- 3C. Anaesthetic problems in scoliosis surgery
- 3D. Oculocardiac reflex
- 3E. What are the indications of caudal epidural anaesthesia in paediatric patients undergoing surgery? Describe the technique and enumerate its complications.
- 3F. Problems associated with dental chair anaesthesia
- 3G. Reversal of anticoagulation after cardiopulmonary bypass
- 3H. Temperature regulation in the neonate and prevention of hypothermia in the neonate in the perioperative period.
- 3I. Anaesthetic concerns for regional anaesthesia in a patient on heparin
- 3J. Ankle block

 $(7 \text{ marks} \times 10 = 70 \text{ marks})$

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MANIPAL ACADEMY OF HIGHER EDUCATION

PG DIPLOMA IN ANAESTHESIOLOGY (DA) EXAMINATION - APRIL 2019

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

Thursday, April 04, 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.
- 1. A one year old child sustains a cardiac arrest during inhalation induction with halothane. Describe the cardiopulmonary resuscitation of this infant.

(15 marks)

2. Describe coagulation pathway. Write a note on perioperative use of unfractionated heparin and its anaesthetic implications.

(15 marks)

- 3. Write short notes on:
- 3A. Automated external defibrillator
- 3B. Factor VIII
- 3C. Management of malignant hyperthermia
- 3D. Anaesthetic implications in MRI suite
- 3E. Monitored anaesthesia care and coronary angioplasty
- 3F. Ventilatory management of ARDS patient in ICU
- 3G. Diagnosis of fat embolism syndrome
- 3H. Massive blood transfusion
- 3I. Scavenging systems
- 3J. Liposuction and anaesthesia

 $(7 \text{ marks} \times 10 = 70 \text{ marks})$