

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (ANAESTHESIOLOGY) FINAL EXAMINATION
AUGUST 2015

Date : 7th August 2015

Time : 1.00 p.m. – 4.00 p.m.

LONG ESSAY QUESTIONS

Answer any **three** questions.

Answer each question **in a separate book.**

1. A 45 year old lady is scheduled to undergo a right hepatectomy for a hepatoma.
 - 1.1. Describe the important aspects you would consider in the preoperative assessment. (30%)
 - 1.2. How do you minimize blood loss during surgery ? (20%)
 - 1.3. Outline the measures that can be taken to minimize postoperative liver failure. (40%)
 - 1.4. List the other complications that may occur postoperatively. (10%)

2. A 72 year old male is admitted with critical ischaemia of the left lower limb. He is scheduled for a left femoro popliteal bypass surgery.
 - 2.1. What patient factors would pose a challenge for his surgery ? (20%)
 - 2.2. Discuss how you would assess this patient preoperatively. (30%)
 - 2.3. Briefly describe your anaesthetic technique for this patient. (30%)
 - 2.4. Describe the postoperative management. (20%)

3. A 35 year old male with a Body Mass Index (BMI) of 40 kg/m^2 is scheduled for a tonsillectomy.
 - 3.1. What features in the history and examination would suggest that he has obstructive sleep apnoea (OSA)? (20%)
 - 3.2. What preoperative investigations would be useful in the assessment of the severity of OSA? Indicate the abnormalities you would expect to find. (20%)
 - 3.3. How would you optimize this patient preoperatively ? (20%)
 - 3.4. Outline the intraoperative management of this patient. (30%)
 - 3.5. List the postoperative complications that you would anticipate. (10%)

4. A 45 year old male was admitted to a medical ward following sudden onset weakness of both lower limbs. While in the ward he developed respiratory distress. You are asked to assess this patient in view of admission to the ICU.
 - 4.4. What clinical features and investigations are helpful in making a diagnosis of Guillain Barre syndrome ? (25%)
 - 4.5. Briefly describe the pathogenesis of Guillain Barre syndrome. (15%)
 - 4.3. How do you manage this patient during
 - 4.3.1. the acute phase of the illness ? (30%)
 - 4.3.2. Rehabilitation ? (10%)
 - 4.4. Draw up a nutrition plan for this patient. (20%)

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AUGUST 2015

Date : 10th August 2015

Time : 1.00 p.m. – 4.00 p.m.

Short Answer Questions

Candidates are required to answer all twelve questions.

Candidates who fail to attempt any one question will not pass the examination.

All questions carry equal marks.

Answer each part in a separate book marked A and B.

PART A

1. A 60 year old gentleman with moderate chronic obstructive pulmonary disease (COPD) is scheduled for a total knee replacement.
 - 1.1. Describe the pathophysiology of COPD. (30%)
 - 1.2. How would you assess the severity of COPD ? (20%)
 - 1.3. Classify with examples drugs used to manage COPD. (20%)
 - 1.4. List advantages of regional anaesthesia for this patient. (30%)

2. A 23 year old patient is admitted to the ICU with a history of traumatic subdural haematoma. He has a GCS of 8/15 (E=2 V=2 M= 4). It was decided to insert an external ventricular drain (EVD) to monitor intracranial pressure (ICP) and to ventilate for 24 hours. He was intubated, sedated and paralysed.
 - 2.1. Draw and explain the relationship between cerebral volume and pressure. (20%)
 - 2.2. Draw and explain the normal ICP wave form indicating its significance. (30%)
 - 2.3. His ICP suddenly increased to 40 mmHg. How do you manage this situation ? (50%)

3.
 - 3.1. Indicate how laboratory tests will identify abnormal thyroid function. (10%)
 - 3.2. How would you assess and control the effects of thyrotoxicosis prior to Surgery ? (40%)
 - 3.3. List the causes of stridor following thyroidectomy. (20%)
 - 3.4. What is the immediate management of stridor? (30%)

4.
 - 4.1. List the electrical hazards in the operating theatre. (10%)
 - 4.2. When an electric current passes through an individual what factors would determine the outcome ? (20%)
 - 4.3. Explain how an isolated (floating) power supply is safer compared to an earthed (grounded) power supply. (25%)
 - 4.4. How can leakage current cause micro shock ? (25%)
 - 4.5. Explain CF electrical equipment. (20%)

5. A Jehovah's Witness is scheduled for a total abdominal hysterectomy due to menorrhagia.
 - 5.1. Explain how you would decide in avoiding blood and blood products during the perioperative period according to the patient's wishes. (30%)
 - 5.2. What preoperative optimization would be appropriate for this patient? (30%)
 - 5.3. What special precautions would you take during the intraoperative period? (40%)

6. A 4 year old 16kg boy is **admitted** to the Day surgery unit for a right inguinal herniotomy.
- 6.1. What are the important pre-operative considerations and management strategies? (20%)
- 6.2. List the steps you would take in anaesthetizing this child. (40%)
- 6.3. What would you ensure prior to discharging this child from the day unit ? (40%)

PART B

- 7.
- 7.1. What clinical signs would indicate inadequate depth of general anaesthesia ? (20%)
- 7.2. List the indirect (40%) and direct methods (40%) of monitoring depth of anaesthesia indicating the benefits and limitations of each method.
8. A 50 year old male presents to the pain clinic with excruciating pain of the left arm following a crush injury a month ago.
- 8.1. On what basis would you diagnose Complex Regional Pain Syndrome ? (40%)
- 8.2. What information would you provide to this patient once the diagnosis is confirmed? (20%)
- 8.3. State the medications available to control pain (20%) and list the other therapies (20%) that help in the management?

9. A 30 year old male is admitted following a road traffic accident to the Emergency Department. He is confused, pale, respiratory rate is 35/minute. Pulse rate is 125 beats/minute, blood pressure is 80/60 mmHg.
- 9.1. What life threatening injuries can this patient have? (30%)
- 9.2. Outline your immediate management of this patient (70%)
- 10.
- 10.1. Describe the anatomy of the epidural space. (30%)
- 10.2. What are the complications of epidural anaesthesia? (30%)
- 10.3. Outline the measures that can be taken to minimize these complications. (40%)
- 11.
- 11.1. What are the patient positions used for posterior fossa surgery in the brain? (10%)
- 11.2. Give the problems you may encounter in these positions. (45%)
- 11.3. How would you overcome them? (45%)
12. A 32 year old mother in her second pregnancy (PI - Emergency LSCS) with a POA of 35 weeks is diagnosed to have a placenta praevia with placenta percreta. She is scheduled for an elective caesarean section and a possible hysterectomy.
- 12.1. Outline your pre-operative assessment of this patient. (40%)
- 12.2. What are your concerns in the pre-operative preparation of this patient up to the induction of anaesthesia. (60%)