

Part I

Question for preparation: What is hypercapnia? What is the definition? When does it appear? What effect has it on the body? What are clinical signs of hypercapnia? How is CO₂ transported in the body?

What is the advantage of sidestream and mainstream measurement?

Describe the ideal muscle relaxant? Which existing agent comes closest to that?

Explain sugammadex?

What is the coeliac plexus? What can you say about it?

Explain the pathway of pain.

What can you say about the function of opioids, how do they work and where can you find which receptor?

Part II

Question for preparation: Think about any receptors which have to do with anaesthesia and give examples for them.

Can you explain the Frank-Starling-Law? How is cardiac output defined? How can you enhance it?

Dose-effect-relationship? Potency of drugs? How does binding to a receptor work? How do drugs compete for a receptor?

Describe the blood supply of the liver. What is so special about it? How is the oxygen content in the liver and is it already under normal conditions at risk for hypoxia? Explain what the first-pass-effect is and give examples for it.

How is CO₂ measured? How does capnographie look like? Which different traces can it show?

How do volatile anaesthetics cause muscle relaxation?

Part III

Question for preparation: A young and until now healthy woman comes to your ICU. Six days ago she came back from a Mediterranean holiday and developed headache and fever. She is treated with 6 Million IE Penicillin orally for now 3 days, but is still deteriorating? Her pO₂ is 43mmHg under a FiO₂ of 40%. On auscultation you can hear a bronchial sound over the left lung. Her CRP is raised and her platelets count 53.000/μl. What protocol do you follow? How do you treat her?

You do a Bierblock and notice that the cuff is defect? What are your considerations and what do you do?

Chest-x-ray (was demonstrated on a laptop so adjusting the screen really helped) with PAK, thorax-drain, suture clips, pneumothorax.

A three years old kid aspirated a peanut which is now located in the right bronchus. How would you do the anaesthesia?

What can you tell about respiratory insufficiency? How can you detect it via premedication?

Part IV

Question for preparation: A 45 years old patient comes with lumbar disc herniation and progressive neurologic dysfunction. He has asthma and is on three drugs treating asthma which he cannot remember. On auscultation you hear a heavy wheezing. What is your plan for the anaesthesia?

Can you explain QT-Syndrom? Reasons for it? Treatment?

ECG: SR, bradycardia (P-Waves show a heart rate <40, but with ES around 60/min), LT, bigeminy with SVES and VES, slightly arrhythmic, only a minor sign of ST-depression in V6 (was a photocopy and the quality was not too bad; was written at 25mm/s)

How can you measure pain? How can you do it in kids?

General information:

There were three groups of around eight candidates. During each part the members of the first group were isolated until the last group was taking the exam.

Before each part you have exactly 10 minutes to prepare the given questions. Pen and Paper is provided. Your notes are kept by the examiners.

All candidates of one group took their exam in one room together. Surprisingly that works quite well and although we expected to be disturbed by the examinations at the table around us we did not take too much note of each other.

During the presentation of my preparations I was only interrupted a few times for questions, but all in all I had the chance to follow my notes and two times basically talked completely during the 12.5 minutes of the first examiner.

As far as I understood it there are three questions which must be discussed, but there are a few more which the examiners might ask later.

By three or four topics I directly said that I have hardly any knowledge about this topic, said the few things I knew and then fortunately we moved on to another topic.

The examiners were all very polite and sometimes even helpful. Most of the time they do not indicate if you are right or wrong so that is nothing to feel unsure about.

Between each part of the examination there is about 1-1.5h time in which you more or less can do whatever you like to do, but you have to be back for your preparation exactly on time.

You can bring your learning stuff, laptops and mobiles, but you are not allowed to use them from the time on where your preparation starts.

After the last group finished it took around 30 minutes until the results were presented. Everyone got his result in a closed envelope so it was anonymous.