



Anesthesia Mini-OSCE

Anesthesia mini-OSCE depends mainly on seminars (you can study from the dossier, slides or your notes) but you **MUST** cover almost all subjects.

Unfortunately, there is no collection of photos that covers everything. In this link you can find some photos BUT it isn't enough. Also, it is useless without studying theoretical part.

<https://www.mediafire.com/folder/xdd34iis1v4ic/Pics#xdd34iis1v4ic>

It is good to study from online slides as they contain colored photos along with theoretical material.

Link for slides:

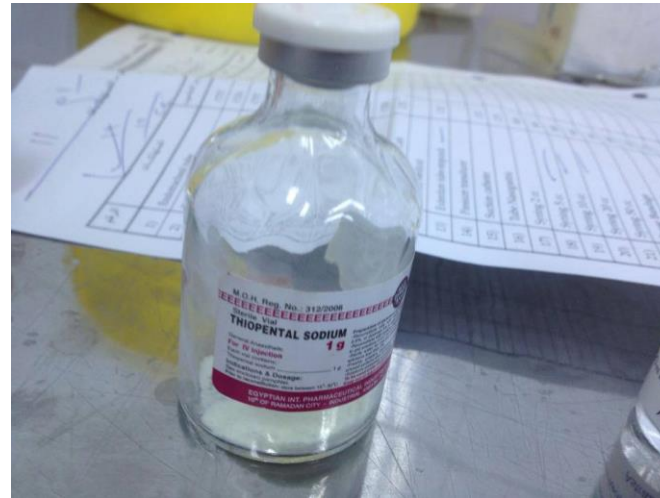
<https://drive.google.com/drive/folders/0B8JfD5OO8K3Fa1hWckpHRUhReDg>

Or you can search for photos on google while you are studying from dossier.

They commonly ask about anesthetic agents. It is essential to study from the dossier or slides. Questions regarding anesthetic drugs usually come with photos for labeled containers meaning that they don't ask you to identify what you see, rather they ask about properties of drugs and comparison. So it is very important to study from the dossier.



Lidocaine



Thiopental sodium

For endotracheal tubes, this site is very helpful to study from.

https://www.howequipmentworks.com/tracheal_tubes/

Endotracheal tubes :

- cuffed , vs non cuffed (preferred for children up to 8 y of age)
- regular vs preformed
- reinforced vs non-reinforced

How to confirm that the tube is in its correct position :

- 1) visualization of the tube entering between the vocal cords
- 2) BL breath sounds on chest auscultation
- 3) negative breath sounds in the stomach
- 4) fogging of the tube due to water vapor in expired air'
- 5) absence of gastric contents in the tube
- 6) movement of chest with ventilation
- 7) capnography , end tidal CO₂ , and pulse oximetry readings

before intubation :

- 1) examination of the face
- 2) mallampati classification
- 3) laryngeal view grading
- 4) thyromental distance
- 5) range of motion at the temporomandibular joint
- 6) cervical range of motion

complications :

- 1) esophageal intubation
- 2) endobronchial intubation
- 3) impaction of the distal end of the tube -> murphy eye will prevent the total obstruction of the tube

Sizes of endotracheal tubes:

- 1) infants internal diameter 3.5 , length 12
- 2) children : internal diameter $4 + (\text{age}/4)$, length $14 + (\text{age}/2)$
- 3) adults internal diameter : female 7-7.5 male 7.5 – 9,
length 24

Nasal airway



Oral airway



3-way connector for IV set



IV set



Spinal Quincke needle





Non-rebreathing mask :
Variable performance system



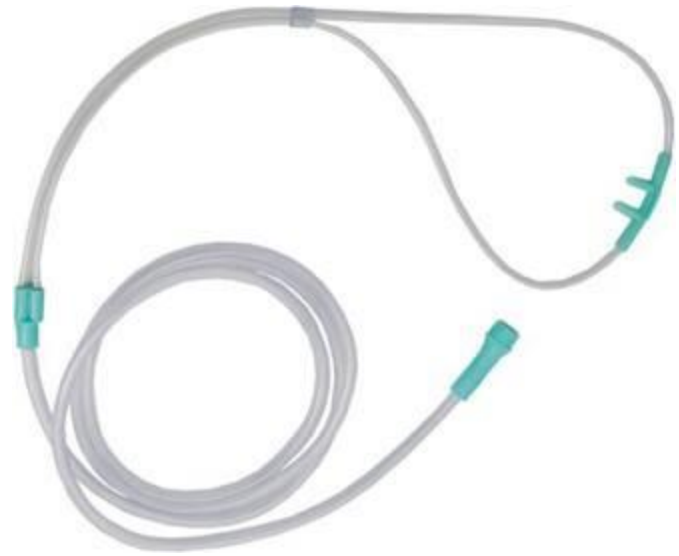
Venturi mask :
Fixed performance system
Bernoulli principle

Simple face mask :
Variable performance
system , small capacity

Low flow (6 L/min)



Nasal cannula :
Variable performance system



Cricothyrotomy set



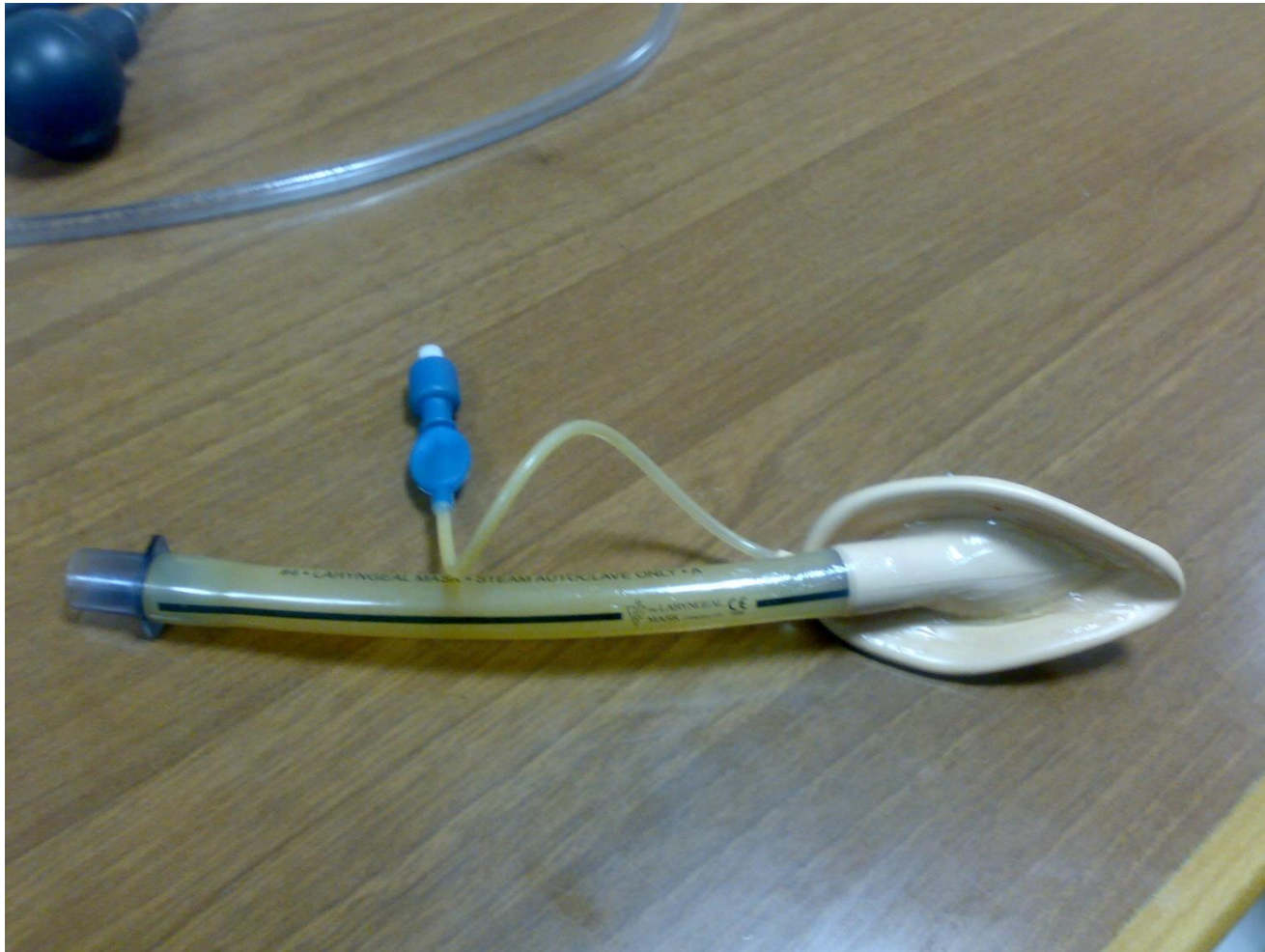
Arterial cath



Epidural catheter



Laryngeal mask



Spinal needle



Mallampati score



Mini-OSCE past exams

3rd group

Anaesthesia Mini-OSCE 8/12/2016

1.

1.

A. What are the name of procedures?

1. Internal Jugular Central Venous Line Insertion.
2. Subclavian Central Venous Line insertion.



2.

B. Mention two advantages of 2 over 1?

1. No risk of carotid artery puncture
2. No risk of neck haematoma



2. Complete the rest of the Reversible causes of cardiac arrest: (4 H's and 4 T's)

H's

1. Hypovolemia.
2. Hypoxia.
3. Hyperkalemia.
4. Hypothermia.

T's

1. Tension pneumothorax.
2. Tamponade.
3. Toxins.
4. Thrombosis.

3. A man with recent cardiac arrest (was resuscitated), came with this rhythm, how do you manage him initially?



He has sinus bradycardia with a recent asystole so we manage him as if he is unstable and give him Atropine with a dose of 0.5 mg repeated to a maximum of 5 times to reach 3 mg.

4. Mention 4 methods used to make insertion of peripheral IV cannula easier (vein more clear):

- Put limb in a dependent position.
- Use muscle pump to fill the vein.
- Tapping over the vein.
- Warming the puncture site.
- Spray area with alcohol or nitrolingual spray.

5. Questions about the following picture:

A. To which group of local anaesthetics does it belong:
Aminoamides

B. Where is it metabolized: Liver

C. What is its concentration in mg/dL: 2000



6. There was preoperative assessment report of a patient with following questions:

A. Identify if you expect him to have a difficult intubation: yes.

B. Mention 3 causes for your answer:

- Mallampati class 3
- Thyromental distance = 5 cm which smaller than 6 cm.
- Head extension limit of 25 degrees, it should be more than 35 degrees.

7. A patient with asthma and hypertension of 170/100, what is his ASA class?

He has two systemic diseases so his class is ASA 3.

8. For the following picture

A. What is the name of this procedure: Epidural needle insertion. (الإبرة مدرجة)

B. What are the last 3 layers passed:

- Supraspinous ligament.
- Intraspinous ligament.
- Ligamentum flavum.

After those 3 you reach the epidural space.



9. Questions about these drugs; Suxamethonium, Rocuronium, and Neostigmine:

A. Which is used for rapid sequence induction: Suxamethonium (Rocuronium is an alternative if Suxamethonium is not used).

B. What is the reverse to Suxamthonium: No one of them is reverse to suxamethonium (it's metabolized endogenously).

C. Which two of them causes bradychardia: Suxamethnoum and Neostigmine.

10. About the solution in the picture:

Mention the concentrations of:

K^+ : 5 mmol/L

Cl^- : 111 mmol/L

Ca^{+2} : 2 mmol/L

Mg^{+2} : Zero.



11. A.

Mention 3 of the following devices with variable performance:

1. Nonrebreathing face mask.
2. Simple face mask.
3. Nasal catheter.



B. What is the maximum FiO2 of the non-rebreathing mask? 85%



12.

A. What is the name of this device:

Mapleson F (Jackson-Rees ' circuit).

B. What is it used for:

For pediatric anesthesia.



13. Name these parts:

1.

2.

3.

4.

1. Flowmeters.

2. Airway pressure meter. (this picture is downloaded from internet so it may not be the pressure meter in this picture).

3. Bellows canister (Bellows assembly; creates the pressure for mechanical ventilator)

4. **Adjustable pressure limiting valve.**



14.

A. What is this device: Mechanical ventilator.

B. Mention 3 of its complications:

- Barotrauma.
- Pneumothorax.
- Mucosal injury with tracheal stenosis.

There are a lot of other complications, mentioned 3 only.



15. There was a picture of a soldier bleeding from his lower limb, it says he reached the hospital with no measured blood pressure and he was unconscious:

A. What is the diagnosis:

Haemorrhagic hypovolemic shock.

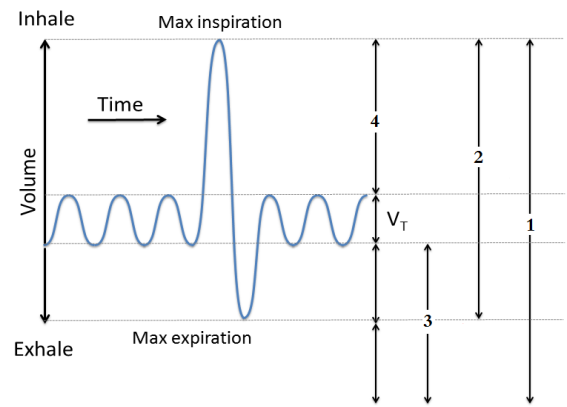
B. How much blood did he lose?

More than 40% (2 L) of his blood.

2nd group – 9/11/2016

1- name the numbered volumes and capacities:

- 1- TLC
- 2- Vital Capacity
- 3- FRC
- 4- Inspiratory reserve volume

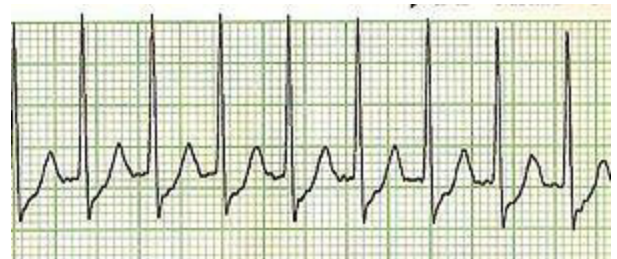


2- Match:

- 1- Pediatric : 3
- 2- Highest flow: 2
- 3- Blood transfusions: 2
- 4- Gauge 20: 1



3- a patient presented to you with this ECG, the patient was fully conscious, not in pain, normal vital signs.



- 1- What's your diagnosis? SVT
- 2- Treatment? Adenosine 6 mg, if no response give 12 mg, if no response give 12 mg again

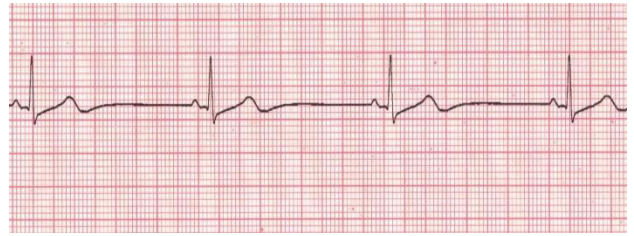
4- ECG:

Diagnosis: sinus bradycardia

Two perioperative causes:

Drugs (like propofol)

Hypoventilation



5- A) MAC value for each:

1- 1.85%

2- 1.3%

B) which one is more potent? 2

C) which one is used for induction? 1



6- Child 6 years old:

What is the suitable size of an endotracheal intubation? 5.5
(4+age/4)

What is the depth of insertion? 17 (14+age/2)

7- A picture of anesthesia record showing a patient who has hypertension controlled by medications, otherwise he is healthy. What is the ASA class? 2

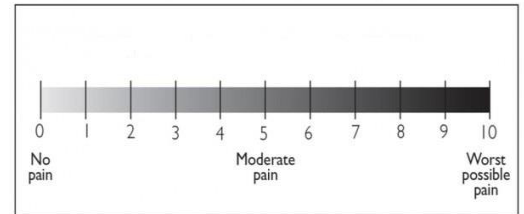
8- What is this? Pain score

How it works? 1-3 mild pain > give drugs that work on prostaglandins (paracetamol, NSAIDs...), 4-6

moderate pain > give weak opioids

(like codeine), 7-10 severe pain > give strong opioids

**not sure of answers



9- A) What is mask 1 & what is the maximum FiO2 that can be delivered by it?

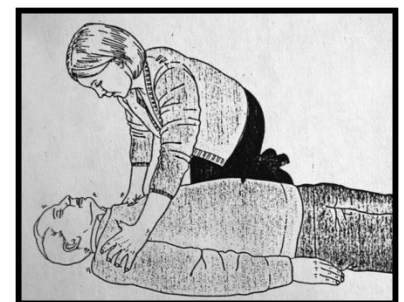
Non-rebreathing face mask, FiO2 up to 85%



B) what is FiO2 of mask 2 when the flow is 5 L? no answer

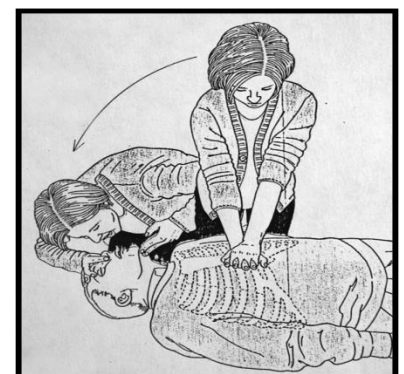
10-A) What is the rescuer doing in this picture?

Checking the response of the patient



B) How do the two rescuers synchronize their work in this picture?

30 chest compressions – 2 breaths



11-A) what is rocuronium? NDMR

B) mention two ways to counteract it?

Bridion & neostigmine



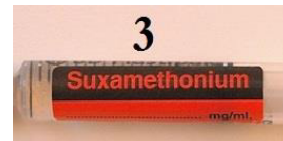
12- match:

-Long acting analgesic.. 4

-most potent analgesic.. 2

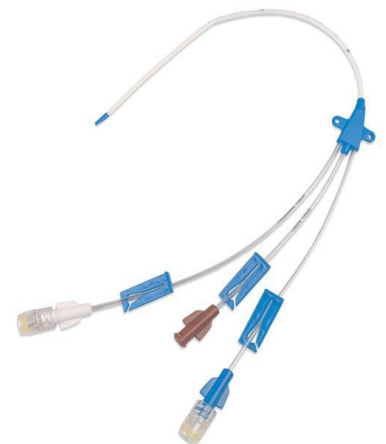
-depolarizing muscle relaxant..3

-short acting muscle relaxant.. 3



13- A) What is this? Central venous line

B) Mention two complications of its use
pneumothorax, arrhythmias



14- In ALS, if the rhythm is shockable, explain the doses and administration of the drugs.

adrenaline 1 mg after the third shock then repeat every 4 minutes
amiodarone 300 after the third shock

15- soon after inserting the cannula, I'm injecting something into it.

What is it? Normal saline

What I'm looking for? Swelling & resistance



1st group – 13/10/2016

1) pictures about endotracheal tubes and the is match between images and it indication?

- a) abdominal hernia surgery.....cuffed endotracheal tube
- b) child abdominal surgery non cuffed endotracheal tube
- c) mandibular surgery preformed endotracheal tube
- d) maxillary sinus surgery preformed endotracheal tube



Q2) picture about ECG and the q was what is the rhythm and how can I treat it?

The ESG was show atrial fibrillation and the treatment is 300mg amiodarone

Q3) picture shows chain of survivor and the q is what is the aim of each chain?



Q4) 1- what are they?

2- which one is more potent?

3- which one is better used for induction?



Q5) picture shows flowmeter and the q was what is the function of it and there is an arrow on CO2 absorbent and the q was identify the structure?

Q6) x-ray picture one for pneumothorax and the other for intrapulmonary shunt and the q was what is the management for these x-ray?

Q7) picture shows D5W (dextran 5water) and the q was what is the content of dextran mg/ml in this solution and if this solution hypo/iso/hyper tonic?

Q8) picture shows ECG pattern. the q was identify the rhythm and give tow possible causes?

Q9) identify four events in this picture?

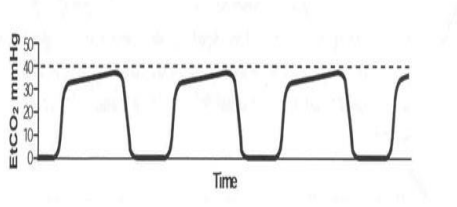


Q10) mention two types of this device and two indications for its usage



Q11) picture shows pules wave and o2 sat was 90. the q was what is the type of monitor in this picture and give 2 possible cause for the patient sat?

Q12) give two measurements that can be taken from this graph:



Q13A picture of 4 medicines (rocuronium, fentanyl, thiopental, propofol):

Match each medicine to its correct description:

- 1- last to be given in induction
- 2- releases the most histamine
- 3- most potent inducer
- 4- analgesic

Q14)- based on what principle does this mask work? Bernoulli's

2- what type of mask is this? Fixed performance system



Q15) 1- what is this

2- give a contraindication for its use

3- name two conditions where it is used?



Special thanks to Hasan hammo and Tariq bushnaq for helping.

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ANAESTHESIA MINI-OSCE 2015 QUESTIONS

By Doctor 2011

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(1)

Look at the assigned numbers and answer the following:

- What are the solutes found in solution 2 (ringer lactate) but not in solution 1 (normal saline)?

Lactic acid, potassium, Mg

- What solution is considered slightly more HYPOTonic than the other?

Ringer lactate



(2)

- Identify the shown device:

Incentive spirometry (pulmonary toilet)

- Mention two indications for it:
Post-op exercise to prevent atelectasis, measure FRC?



(3)

- What is the used maneuver?
Cricoid compression
- Why is it used?
Done in RSI (rapid sequence induction)
to prevent aspiration of regurgitants



(4)

- Identify this equipment:
Touhy needle (epidural cath introducer)
- Give two indications:
Acute pain management (pancreatitis), Obstetrics operations
-



(5)

- Which one of these causes more nausea and vomiting?

Thiopental

- Which one is contraindicated in porphyria?

Thiopental



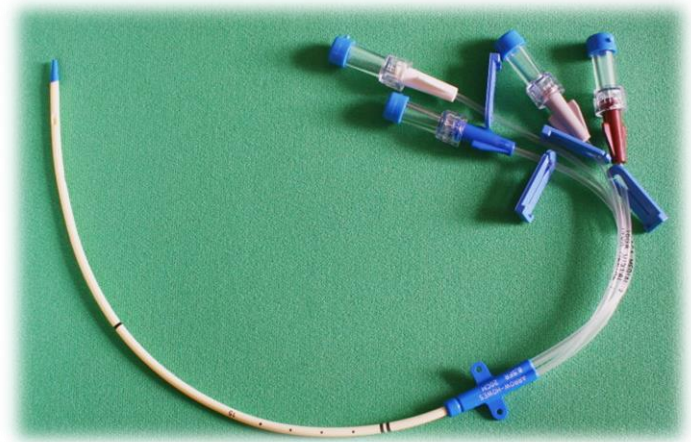
(6)

- Identify these two parts of the anaesthesia machine:
1:Isoflurane vaporizer, 2: sevoflurane vaporizer
- Which drug is more potent?
Isoflurane (more potent)
- Which is more suitable for induction of hypnosis?
Sevoflurane (induction)



(7)

- Mention three parts of the body in which this line can be put:
Internal jugular vein, subclavian vein, femoral vein
- Mention one contraindication of its usage (other than patient refusal):
Bleeding diathesis



(8)

- Identify this equipment:
Preformed single-lumen oral cuffed endotracheal tube
- Give two functions of the pointed part:
Prevent aspiration, prevent air leak (good ventilation)



(9)

- What is the cause of whitening in this lung?

Pneumonia vs atelectasis

- Mention two lines of treatment:
Abx?, O2 support, PEEP.

