

# TEST BANK

Doctor 2019

## SUBJECT:

Anesthesia MiniOSCE

First semester

## COLLECTED BY :

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جراح

## MINI-OSCE ANESTHESIA – FIRST MONTH

### First question :



**Q1:** which drugs are analgesics ?

- Ketamine .

**Q2:** pain on injection ?

- Propofol & etomidate .

**Q3:** used in iv induction ?

- All of above.

### Second question :

4 years old female patient operated to OR :

**Q1 :** what is the type of anesthesia ?

- General Anesthesia .

**Q2 :** what is the preoperative management to reduce pain ? (we are not sure about the answer )

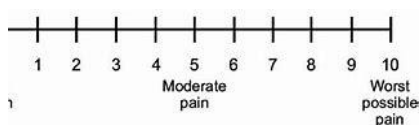
- Ketamine (dose 5-10 mg/kg ) 30 min before induction.
- **OR** Regional (Caudal): extradural block for infraumbilical procedures  
Acetaminophen - PO 10-15 mg/kg, PR 40 mg/kg, IV 20mg/kg  
NSAIDS (diclofenac sodium suppository ) •

**Q3 :** what is the appropriate size of endotracheal tube to this pt ?

- Cuffed = 4.5
- Non cuffed = 5

**Q4 :** calculate fluid maintenance . (Weight??)

### Third question :



**Q1:** Name the previous scale .

- Numerical rating scale .

**Q2:** what is the appropriate value to discharge the patient from recovery room ?

- Patients should have a maximum pain score of 4

### Forth question :

Patient in active allergy reaction or she take antibiotics ( we are not sure about that).



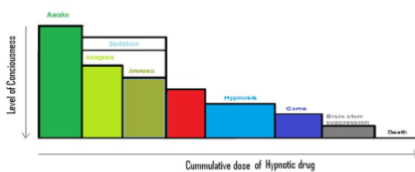
**Q1** : what is your diagnose ?

- angioedema - anaphylactic shock

**Q2** : type the first three things that we do in this case .

- stop exposure to the trigger.
- Secure airway + O2 supplement + continuous monitoring .
- Epinephrine injection if necessary.
- IV access +Saline administration.

### Fifth question :



**Q1**: the hidden part in the previous chart represent ... ?

- Excitement

**Q2**:What is the function of the numbered parts on this anesthesia machine ?



1-vaporizer .

2-gas flowmeter.

3- airway and tubing pressure monitor.

4-adjustable pressure valve .

**sixth question :**

**Q1:** answer the questions below regarding the following picture



- name the previous picture .

- Epidural needle.

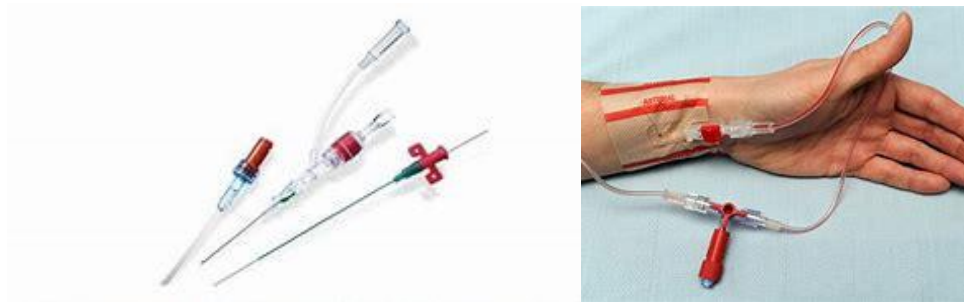
- gauge of it .

- 25.

- length of it .

- 8 cm.

**Q2:** before inserting arterial line we have to do ?



**a-** Check perfusion of the extremities .

**b-** Allen's test :

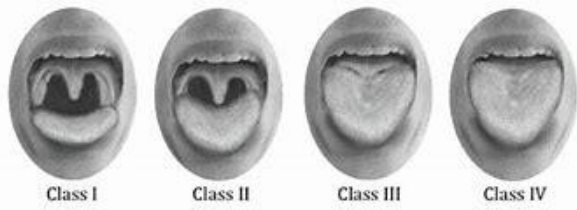
- Ask patient to close his hand.
- Apply pressure on radial and ulnar arteries .
- Ask patient to open his hand.
- Relieve pressure from ulnar artery ( here the perfusion should be return within 5 second , if not try again by relieving pressure from radial artery and occluding of ulnar artery.

**c-** Positioning : extension position

**d-** Prepare equipment ( cannula gauge 25 , lidocaine .. etc ).

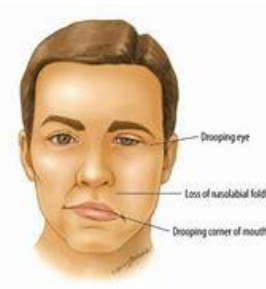
**e-** If patient awake give 1 cc lidocaine .

**Seventh question ( there are 4 pictures , but our colleagues forgot 2 of them )**



**Q1 :** this score called ?

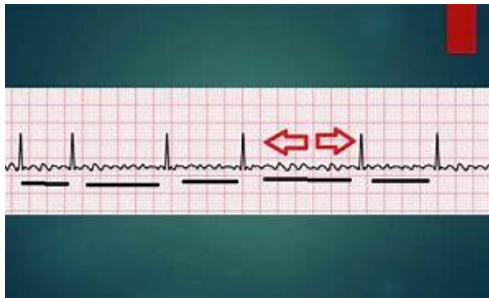
Mallampati CLASSIFICATION - pharyngeal view .



**Q2:** what is the difficulty in airway management in this patient ?

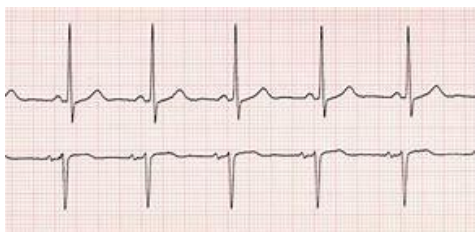
- Facial ASYMMETRY.

**Eighth question ( the question was about pic of ECG strip and they ask about your diagnose depend on what you see)**



**Q1:** what is your diagnose ?

- A Fib , irregular irregular rhythm.

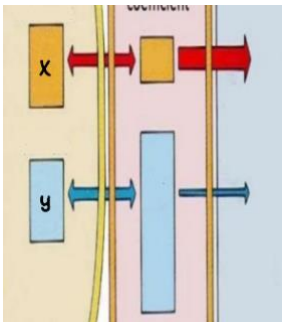


**Q2 :** calculate HR of the previous ECG strip .

- $1500 / 18 = 83$  or  $300/3.6$

**In addition to question about NEWS .**

First question :



Q1 : Which agent is faster in induction?

- X

Q2: Which agent is faster in recovery?

- X

Second question :



A photo showing syringe of propofol:

Q1 : How much propofol is in the syringe?

- 10 mg/cc , we have 4 cc  $\rightarrow 10 \times 4 = 40$  mg

Q2: What is the induction dose for a 60 kg patient?

- Induction dose 1.5 , 10 mg /cc  
 $60 \times 1.5 = 90 \rightarrow 90 / 10 = 9$ cc or 9ml

Q3 : How can we decrease the pain caused by this agent?

- Co-administration of 1 cc lidocaine.

Q4: Mention another uses of propofol other than induction?

- Anti-epileptic , antiemetic , antipruritic, prevent PONV.

### Third question :

A pediatric patient weighing 14kg entered to the OR, for a foreign body removal from the right ear under GA.

**Q1 :** What is the induction agent for this patient?

- Sevoflurane.

**Q2:** What is the maintenance deficit for this patient?

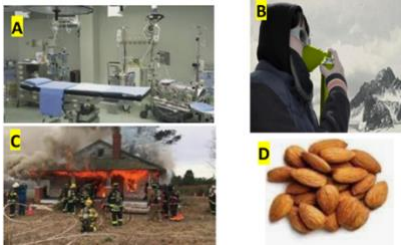
Maintenance  $\rightarrow 10 \times 4 + 4 \times 2 = 40 + 8 = 48$  ml

Deficit = maintenance \* fasting time ( fasting time??)

**Q3 :** Mention 3 things to do for anesthesia maintenance?

- 1- continuous inhalation of anesthetic gases ( iso , sevo )
- 2- Propofol
- 3- NM blockers agent

### Forth question :



Which type of hypoxia in each one of these images:

A  $\rightarrow$  Circulatory hypoxia. B  $\rightarrow$  hypoxic hypoxia . C  $\rightarrow$  Anemic hypoxia. D  $\rightarrow$  histotoxic hypoxia ??

### Fifth Question :



**Q1 :** What is this equipment?

- PCA

**Q2:** What is the protective mechanism in this equipment that prevent the patient from reaching the toxic dose?

- Programmable computerized pump

**Q3 :** What is the route of administration?

- IV Infusion

**Sixth Question :**



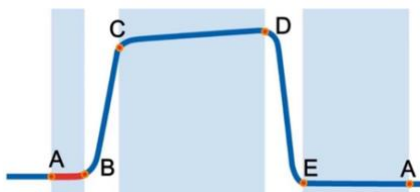
**Q1 :** What is the anesthesiologist doing?

- Inserting central line guided by ultrasound

**Q2:** Give two ways to know if the needle is inserted in the correct vessel?

- U/S
- X-ray

**Seventh Question :**



A question about capnograph, we don't remember the questions.

**Eighth Question :**



**Q1 :** What is the hematocrit in these blood bags?

- 70%

**Q2:** What you should do before administration of blood?

- Double check (pt name , pt ID no. , ID no. Of the unit , ABO compatibility, expired date )

**Ninth Question :**

A question asking about changes of (CO, HR) in each type of shock.. (Decreased, increased)



## MINI-OSCE ANESTHESIA – THIRD MONTH

### First question :

**Q1** :Type antidote for each one of these drugs :

- Succinylcholine : none in phase1 , neostagmine in phase 2
- Rocuronium : neostagmine + suggamedex.
- Vecuronium : neostagimne + suggamedex.
- Cisatracurium : neostagmine only.

**Q2**: pic of ketamine

- Give 2 advantages : appropriate to pediatric patients+ has analgesic effect .
- Give 2 disadvantages : hallucinations + contraindication in patients have CNS lesions.
- Calculate the appropriate dose in millimeter .

### Second question

Female patient operated to C/S spinal anesthesia , after that she complained of severe headache

**Q1**: the cause is ?

- Post dural punctural headache due to leak of CSF.

**Q2**: how we can treat her ?

- Treat with rest , analgesia, caffeine and dural blood patch.

### Third question

**Q1**: answer the questions below regarding the following pictures



- which one of the previous tubes prevent aspiration ?

- Pic 2 + 3 ( anything with cuff)

- which one of the previous tubes stay for along time ?

- Tracheostomy .

**Q2: answer the questions below regarding the following picture**



- What is this maneuver (arrow) called?

- Cricothyroid compression

- Why is it used?

- Done in RST , to prevent aspiration of regurgitant.

### **Forth question**

**Q1:** A patient who had a car accident , was admitted to the OR and underwent an operation . after that he was discharged to the ICU .

-why we put the patient in ICU post-op ?

- for further resuscitation and ventilation.

**Q2:** Female patient diagnosed by septic shock . Her ECG readings shown tachycardia and her MAP less than 65

- the treatment is ?

- Syc.DC shock up to 3 attempts ( 50→NR→100→NR→max. in biphasic )→ if doesn't work give amiodarone 300 mg/10-20min then 900 mg/24 h

- Why do you give this treatment?

- patient has unstable tachycardia.

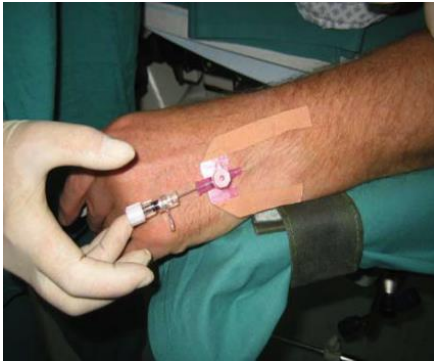
### **Fifth question**

**Q1:** your diagnosis is ?



- pneumothorax .

**Q2: answer the question about the following picture .**



- which part of cannula inside the vein in this picture ?

- plastic part .

-the next step after securing the cannula ?

- check resistance with 5 ml normal saline.

**Q3 : about ringer lactate:**



-Osmolality ?

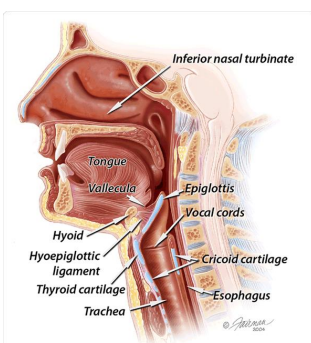
- 279 isotonic

-PH?

- 6.5 slightly acidic

### sixth question

Picture asking you to identify epiglottis and epiglottic vallecular



## seventh question



**Q1** : What is the machine used to get the EEG?

- bispectral index monitoring system

**Q2** : What is the benefit of using this machine?

- to measure the level of consciousness in patients

**Q2** : What is the normal range in patients under GA?

- 40-60

**IN ADDITION TO QUESTION ABOUT TYPES OF SHOCK. (septic shock , cardiogenic shock ... etc).**

اللهم علمنا ما ينفعنا، وانفعنا بما علمتنا، وزدنا علما

Anesthesia | Mini OSCE | 5<sup>th</sup> group

Question (1)



What is the name of this device ?

Vaporizer

What is the name of the drug it contains?

Isoflurane

What is the concentration of it that blunts response to surgical stimulus in 50% of people ?

1.2 ( MAC )

What is the maximum volume this container provides ?

5

Question (2)



A pre-op assessment paper with the following findings:

A patient who has hypertension / diabetes ( on medications for both )/ ex smoker / lung crackles / and this pic for his pharyngeal view

What is the mallampati score?

3

What is the ASA class ?

3

### Question (3)

An ECG for a bradycardic patient / BP 80/50 / confused

What is the diagnosis

Sinus Bradycardia

Calculate the rate

$300/8 = 37.5$  ( regular / 8 large boxes between each two consecutive R waves)

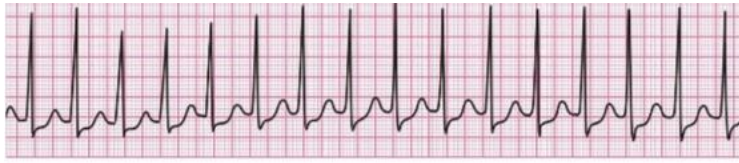
Does he require treatment ?

Yes, signs of shock ( hypotensive + altered mental state )

What is the 1st line treatment ?

Atropine 500 mcg

### Question (4)



An ECG of a pulseless electrical activity :

Why did the team leader asked the one doing the compressions to stop ? (**MAYBE**)

To connect the defibrillator and assess the rhythm to know whether it's shockable or not

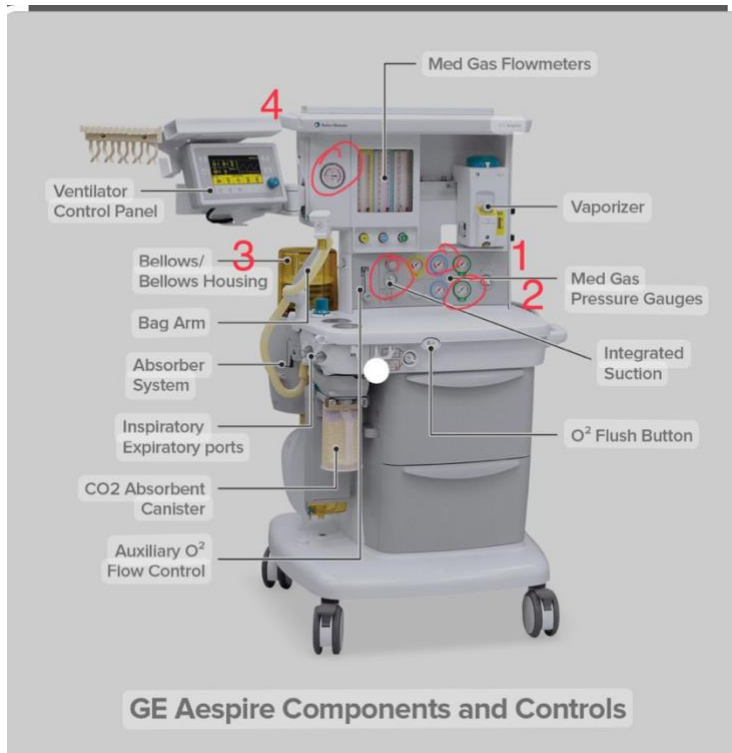
What is the type of the cardiac arrest ?

PEA ( non-shockable cardiac arrest )

What are the two next steps ?

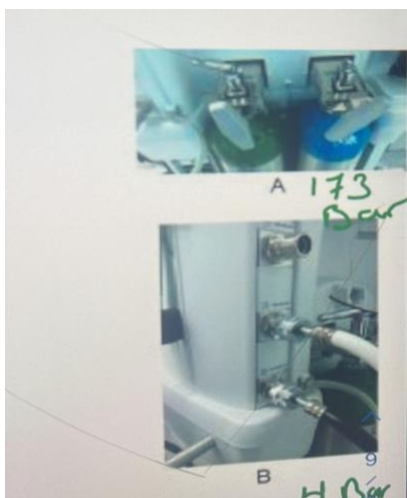
1. After confirmation give 1 mg adrenaline IV
2. Continue compressions 30 / 2 breaths for 2 mins then reassess

Question (5)



- 1 : pipeline pressure control
- 2: cylinders pressure control
- 3: suction pressure control
- 4: airway pressure control

Question (6)



A pic for pipelines vs cylinders ( options : pipelines / cylinders / both / neither )

Which one can use oxygen in the liquid state : pipelines only

Using the DISS : pipelines only ( cylinders pin index )

Both air and oxygen : pipelines pic ( white & black hoses )

4 bar pressure : both

Question (7)

Two pics

1<sup>st</sup>: for an epidural needle

2<sup>nd</sup>: for a black spinal needle

Epidural questions :

What is the name of this needle ?

Touhy needle ( epidural needle )

What is the length of this needle ?

8 cm ( each color block 1 cm )

Spinal :

What is the gauge of this needle ?

22 ( was black / if it were orange then 25 )

What are two possible side effects or complications?

Back pain / hypotension / post dural puncture headache

Question (8)

5-kg infant undergoing a hernia repair surgery

Calculate the fluid maintenance hourly ?

$5 \times 4 = 20$  ml/ hour

Two measure for heat loss prevention?

1. Bair hugger ( heat radiator )

2. Isolation ( covering the patient with warming pieces of materials or so )

3. Warming the administered IV fluids and so



Question (9)

Patient administered to the ICU

HR 130

BP 90/50

O2 sat 95%

Blood loss 1800 ml

What is the class of his hypovolemia ?

Class 3 ( blood loss between 1500-2000)

What are two additional monitors other than the essential that can be used ? (MAYBE)

1. Invasive blood pressure monitor through an arterial blood line
2. Central venous pressure monitor through a central line

Best fluid replacement option ?

Blood (not crystalloids)

Question (10)

ABGS

PH : ~ 7.2

HCO<sub>3</sub> : 29.7

PaCO<sub>2</sub> : ~ 67

What is the abnormality?

Compensated respiratory acidosis

What is the type of respiratory failure ?

Type 2

Question (11)

A patient who :

Doesn't response to verbal stimulation

And when a painful stimulus was applied:

- 1- He opened his eyes
- 2- Uttering sounds
- 3- Flexed his arms and extended his legs

What is his Glasgow coma score ?

2+2+3 = 7

What should we do now ?

GGC score <8 then we intubate

Question (12)

Case and the endotracheal tube used (4 cases / 4 endotracheal tubes pics) :

1. Obese / abdominal surgery : regular cuffed endotracheal tube
2. Nose job: C shaped endotracheal tube
3. Female / uterine bleeding: LMA
4. Someone needs a surgery in his lower jaw / teeth area : N shaped endotracheal tube

Question (13)

Opioids and match to the applicable one :

Best for post-op pain management: morphine

Sublingual administration: we can't remember the regimen but the vial had the phrase " sublingual opioid " or so

ICU sedation: remifentanyl

Comes on the second step of the WHO ladder for pain management: dihydrocodeine

Question (14)

Lidocaine vial (1%) :

What is the family to which this drug belongs ?

Amino-amide local anesthetic ( works on Na channels )

How much is there in 1 ml of this vial ?

The percentage was 1%

$1 \times 10 = 10 \text{ mg/ml}$

Maximum allowed infiltration volume for a 50 kg gentleman?

Without epinephrine

$5/10 = 0.5 \text{ ml/kg}$

$0.5 \times 50 = 25 \text{ ml}$

With epinephrine  
 $7/10 = 0.7 \text{ ml / kg}$   
 $0.7 * 50 = 35 \text{ ml}$

Question (15)

Propofol vs Ketamine

1. Mechanism of action:

Propofol: Increases binding affinity of GABA with GABA<sub>A</sub> receptor.

Ketamine: Mechanism through NMDA (N-Methyl-D-aspartate) receptor antagonism.

2. Which one has an analgesic effect ? Ketamine

3. Which one causes post-op dreams ? Ketamine