Physical examination final OSCE

1- ALL TIME GENERAL (Do this in all stations)

A . Introduction

-Prepare yourself and the patient -introduce yourself -take permission -request to have a chaperone -warm hands - hand hygiene -maintain privacy

-environment: light and temperature

-explain to the patient what you will do before each step

-mention exposure and position

-before palpation : always ask the patient if there is any pain + maintain eye to eye contact

B . Vital signs

-temperature – Heart Rate – Respiratory Rate – Blood Pressure – BMI – O2 saturation

Station 1 : Thyroid physical examination

Position : sitting 90° **Exposure** : Neck fully exposed + manubrium

INSPECTION

1- General look

-Conscious oriented alert to time place & person - Clothing : appropriate to weather

- Agitation : not agitated - Speech : no fast or pressured or slow speech

- Voice : no hoarseness - Apathy : not apathic - No tachypnea or distress or pain

– Not cachectic or overweight -No bovine cough

2- Vitals : especially HR, BP, BMI **>** No tachycardia or bradycardia, regular rhythm.

3- Hand

-Vitiligo – Tar staining - Muscle wasting (thenar & hypothenar)

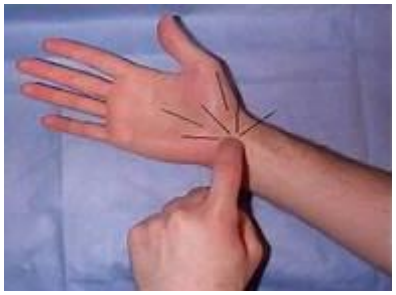
- Sweating - Palmar erythema - Thyroid acropachy - Onycholysis - Brittle nails

-Tremors , fine and flapping - Carpal tunnel syndrome

*Dry or sweaty > on palpation , *Hand temperature > on palpation

*carpal tunnel syndrome is tested by 2 maneuvers : 1.phalen's test 2.tinels test

Phalens test



Tinels test (percuss)

Say : Negative phalen's and tinels tests .

4- Face

- Hair line : normal hair line , no hair thinning & no loss of distal third of eybrows
- Exophthalmous (examined from posterior & lateral) - Periorbital puffiness
- Skin : dry or sweaty - Ophthalmoplegia* - Signs of conjunctival inflammation (redness) - lid lag & lid retraction (ask the patient to follow your finger moving downward)

* Assess ophthalmoplegia by **H** movement, ask the patient to follow your hand + ask if there is any pain or blurness .

5- Neck

- scars - swelling - masses - skin changes - redness - dilated veins
- ask the patient to :

1. drink water or swallow : thyroid moves normally with swallowing
2. protrude the tongue : no masses moves with tongue protrusion
3. open his mouth to see the base of the tongue : no ectopic thyroid at the base of the tongue (use torch pen)

PALPATION (after taking permission + asking about pain + eye to eye contact)

- Generally palpate the area over thyroid anteriorly : no tenderness
- Posteriorly, with neck flexion + use both hands to palpate the thyroid
  say : symmetrical thyroid with smooth surface, no tenderness, no masses & no thrills.
- Again while palpting posteriorly, ask the patient to
  1. swallow . say: thyroid moves with swallowing
  2. protrude the tongue : no masses move with tongue protrusion
- Examine cervical lymph nodes : not palpable
- **Reflexes : do patellar reflex** and say : no hyper or hyporeflexia

- Test proximal myopathy , ask patient to stand while crossing arms. And say : no proximal myopathy.

PERCUSSION

Percuss over the manubrium for dullness : No dullness

AUSCULTATION

1. Auscultate over the thyroid (two lobes) with diaphragm : no thyroid bruit
2. Listen for Mid systolic murmur at precordium > sign of hyperthyroidism , just mention it.

✓ finish you exam with : (just mention it)

- Lower legs for : Pitting edema, pretibial myxedema , dry coarse skin
- Pemberton's sign (raise arms above head level)

Station 2 : Gastrointestinal & Renal General physical exam

Position : supine + pillow ender the head + arms relaxed on both sides

Exposure : xiphisternum to symphysis pubis

INSPECTION

1) General look

- well or ill - pain - distress - body habitus (cachectic or overweight)
- conscious oriented alert to time place & person - vital signs (vital is vital)
- general skin color : no pallor or jaundice - skin folds or stria

2) Face & Eyes :

- jaundice in sclera - pallor - pinguecula - skin rash - spider nevi
- fundoscopy for HTN, DM retinopathy - sialadenitis (parotid swelling)

3) Mouth

- odor (fetor hepaticus or uremic breath or smell of alcohol or fruity breath)
- aphthous ulcer - angular stomatitis or cheilitis - atrophic glossitis (smooth tongue) - **B**ea**F**y red tongue (**B**12-**F**olate deficiency sign)

4) Lymph nodes

Examine cervical + axillary + inguinal lymph nodes (just mention them)

- Mainly : left supraclavicular lymph nodes *
- *Troisier's sign : enlarged Lt. supraclavicular LN in malignancy.

5) Hands :

- clubbing - koilonychia - leukonychia - mercke's lines - lindsay's nails
- tar staining - muscle wasting - dupuytren's contracture - palmar erythema
- temperature - flapping tremor (asterixis) - AV fistula - IV drug abuse

6) Chest :

- spider nevi - Gynecomastia in males - breast atrophy in females
- scratch marks - hair distribution

Station 3 : Focused abdominal examination

Position : 15° supine + pillow ender the head + arms relaxed on both sides

Exposure : xiphisternum to symphysis pubis

INSPECTION

1. **From end of the bed** :

   – symmetry – shape (flat or slightly scaphoid) – full flanks – moves with respiration

   – umbilicus (centrally + inverted)

2. **From right side of the patient** :

   – hair distribution – skin lesions – scars – stroma – stria – scratch marks

   – visible dilated veins – visible peristalsis – visible masses – visible pulsations

   – bruising – incisional hernia

3. **Special maneuvers** :

   a) roll the patient to left then ask the patient to cough (dumphy's sign), and look at hernia orifices (umbilicus + inguinal + femoral)

      say : no dumphy's sign, no hernia and no cough impulse .

   b) ask the patient to raise (flex) his head and neck while lying down

      say : no divercation of recti.

PALPATION (permission + eye to eye + pain + **sit at the level of the patient**)

1. **superficial palpation : 9 areas**

   say : soft and lax abdomen with no tenderness, no superficial masses & no guarding or rigidity.

2. **Deep palpation : same 9 areas**

   Say : no deep tenderness , no deep masses and no rebound tenderness.

3. **Special tests on palpation:** (mostly skip)

a) Rovsing's sign : press on left iliac region > pain in right iliac region

b) Iliosoas sign : ask the patient to raise (flex) their thigh resisting your hand > pain in right iliac region.

c) Obturator sign : do flexion of the knee + internal rotation of hip > pain on right iliac region.

- Say : no rovsing's sign , no iliosoas sign, no obturator sign. All are signs of appendicitis.

Liver examination

1) **Palpate** using your whole hand , ask the patient to take breath every time you palpate , move from right iliac fossa until the costal margin.

If you can feel the liver, say : the liver is palpable and describe its edge (sharp) + surface (smooth or nodular) + consistency (firm or soft) + size + pulsatile or not.

– if it's not palpable , say : not palpable.

2) **Percussion** , ask the patient to hold their breath on expiration, and start percssion from the 2^{nd} intercostal space downward on the mid-clavicular line until you hear dullness, this should be the upper edge of the liver.

Then do percussion again starting from the Rt.iliac fossa upward until you hear dullness, this should be the lower edge of the liver.

Use your meter to measure the **liver span** , normally $8-12$ cm.

3) **Special test : Morphy's sign** , press over the right upper quadrent + ask the patient to take deep breath .

- positive sign if the patient feels pain or holds his breath suddenly
- Negative sign if the patient feels nothing
- Just say : negative morphy's sign.

Spleen examination

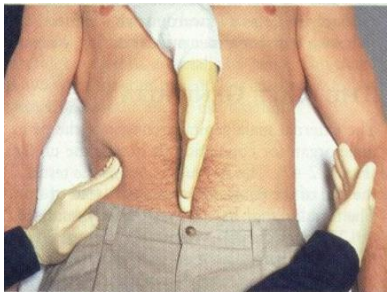
1) **Palpation** , start from Rt.iliac fossa + move diagonally to reach left costal margin, palpate deeply while asking the patient to take deep breath every time you palpate.
   - Say : spleen is not palpable
2) **Special maneuver** : roll the patient to your side + support his back by your left hand + repeat palpation (Rt.iliac fossa → left costal margin)
   - Say : Not palpable and no tenderness
3) **Percussion** : while the patient is still rolled over , percuss over the $9-11^{th}$ intercostal spaces
   - Say : Normal dullness over the $9-11^{th}$ intercostal spaces

Kidneys examination

1) **Bimanual** : use both hands, put your left hand under the right iliac fossa + your right hand above it at the same time + ask patient to take deep breath, then do for the other side as well.
   - Say: Kidneys are not palpable
2) **Ballotment test** : try to push the kidneys above by your left hand
   - Say : No tenderness , the kidneys are not palpable and not ballotable
3) **Renal angle tenderness** : hit a fist at the point where the ribs meet with lumbar vertebra posteriorly
   - Say : no renal angle tenderness

PERCUSSION

1) Percuss generally over the 9 areas
   - Say : normal tympanic percussion note all over the abdomen



2) Percuss over the umbilicus & go downward until the suprapubic looking for dullness.
   - Say : no dullness over the bladder

Ascites

1) **Transmitted thrill** : ask the patient to put his hand in the middle of his abdomen like this > > > >

   Support the left side of the abdomen by your left hand

   Flick the right side of the abdomen by your right hand (finger)
   - Say : no transmitted thrill

2) **Shifting dullness** : by percussion

   − Start percussion from xiphisternum downward to find the most tympanic point + your hand should be horizontal

   − Go to any side laterally, on percussion, find the most dull point + vertical hand

   − Roll patient to the opposite of the side you chose first and repeat percussion over that dull point.

   If dullness changes > means ascites
   - Say : no shifting dullness

AUSCULTATION

1) Bowel sounds > say : normal bowel sounds
2) Renal artery stenosis (bruit) > say: no renal artery stenosis bruit
3) Aortic bruit : no aortic bruit

4) Over the liver for 1.bruit + 2.friction rub

5) Audible splash or successional splash 6) femoral artery bruit (mention only)

FINISH exam with : – JVP exam – lower limbs for edema & pyodermal gangrenosum – sacral edema – chest for heart sounds + Pulmonary embolism + Pleural effusion – **rectal exam** + **genitalia examination** (most important)

Station 4 : general neuro exam

INSPECTION

1. **General look** : –facial expression – anxious or not –involuntary movements
2. **Vital signs** : All especially temperature
3. **Consciousness** : using Glasgow Coma Scale

18.5 Glasgow Coma Scale (GCS)	
Eye opening (E)	
4	Spontaneously
3	To speech
2	To pain
1	No response
Best verbal response (V)	
5	Orientated
4	Confused
3	Inappropriate words
2	Incomprehensible sounds
1	No verbal response
Best motor response (M)	
6	Obeys commands
5	Localises painful stimulus
4	Normal flexion
3	Abnormal flexion
2	Extends to painful stimulus
1	No response

give a grade from 15.

4. **Speech** : –ask the patient to say : ك ك ك , ت ت ت , ب ب ب ,ااااا

   –ask him to count from 1–30 –talk to him

   –ask him to open his mouth, look at the palate for vibration & tongue for deviation – ask him to name objects (طاولة, كرسي) –repeat a sentence after you

   –read a sentence from paper –write a sentence on paper

   Say: no dysphonia , no dysarthria and no dysphasia
5. **Stance & gait** : ask the patient to stand and take few steps forward + backward, walk tandem gait (heel to toe) , do the Romberg test (stand with feet together + closed eyes)

Say : Normal stance & gait , negative Romberg sign, no tandem gait.

station 5 : upper limb motor examination

Position : lying supine with arms relaxed on anatomical position

Exposure : upper limb fully exposed

Inspection

1. Look at both limbs simultaneously > say : symmetrical upper limbs with no deformities
2. Say : no abnormal movements such as fasciculations
3. Say : no muscle wasting

Palpation (permission + eye to eye contact + ask about pain)

Palpate both limbs simultaneously then say :

Normal muscle bulk with no tenderness

Tone : move the patients following parts *bilaterally*:

1. **Wrist** : flexion , extension , supination , pronation . with different velocities.
2. **Elbow** : flexion , extension . with different velocities
3. **Shoulder** : flexion and extension . with different velocities

Say : normal tone, no hypotonia or hypertonia. with no spasticity and no rigidity

Power (ask again about pain)

Let the patient sit upright (change position),

then ask him to move his upper limb against your resistance **bilaterally** :

1. **Shoulder** : abduction + adduction
2. **Elbow** : flexion + extension
3. **Wrist** : extension

4. All Fingers together : extension + flexion
5. Each finger alone : abduction + adduction (put a paper between fingers and pull it while asking him to hold it)
6. Grip power (ask him to grip your hand)

Say : normal power 5/5 in all movements

Pronator drift :ask the patient to outstretch both arms forward on supination (palms up) , and to close his eyes . wait 10 seconds

Say : negative pronator drift .

Positive if hand move to pronator position.

Reflexes : go back to supine position , ask about pain, distract the patient

Do **bilaterally**

1. **Deep tendon reflexes** : biceps C5 + triceps C7 + brachioradialis (supinator) C6
2. ***Hoffmann's sign** : support the patient's middle finger & flick it downward
3. **Finger jerk C8** : put your index & middle finger on the palm of the patient and percuss using hammer .

   Say : normal reflexes (no hyperreflexia or delayed reflexes), no hoffmann's sign , no finger jerk.

   And

   I wanna finish my exam with : abdominal reflexs T8-T12, cremasteric reflex L1-2, and primitive reflexes.

*Hoffmann’s sign：

Station 6 : lower limbs motor examination

Position : lying supine with legs relaxed on anatomical position

Exposure : lower limb fully exposed

First ask the patient stand with arms crossed to check proximal myopathy + to take few steps and the tandem gait to check stance and gait,

and say : normal stance and gait + no proximal myopathy

Inspection

1. Look at both limbs simultaneously > say : symmetrical lower limbs with no deformities
2. Say : no abnormal movements such as fasciculations
3. Say : no muscle wasting

Palpation (permission + eye to eye contact + ask about pain)

Palpate both limbs simultaneously then say :

Normal muscle bulk with no tenderness

Tone : move the patients following parts *bilaterally* :

1. Rolling legs followed by sudden flexion
2. Test **ankle clonus** : hip + knee should be flexed on $90°$ then do dorsiflexion of the ankle multiple times then stop.

Say : normal tone, no hypo or hypertonia, no spasticity or rigidity and **no ankle clonus**

Power ask about pain again

Ask the patient to move his lower limb against your resistance **bilaterally** :

1. Hip : flexion + extension

2. Knee : flexion + extension
3. Ankle: dorsiflexion + plantarflexion + eversion + inversion
4. Big toe extension

Say: normal power 5/5 in all movements

Reflexes ask about pain, distract the patient , do **bilaterally**

1. Knee reflex L3-4
2. Ankle reflex S1
3. Plantar reflex (babinski sign)

Say : Normal reflexes (no hypo or hyperreflexia, and no delayed reflexes) no Babinski sign ,

And

I wanna finish my exam with : abdominal reflexs T8-T12, cremasteric reflex L1-2, and primitive reflexes.

Station 7 : Sensory physical examination

Position : sitting 90°

Exposure : appropriately exposed ☺

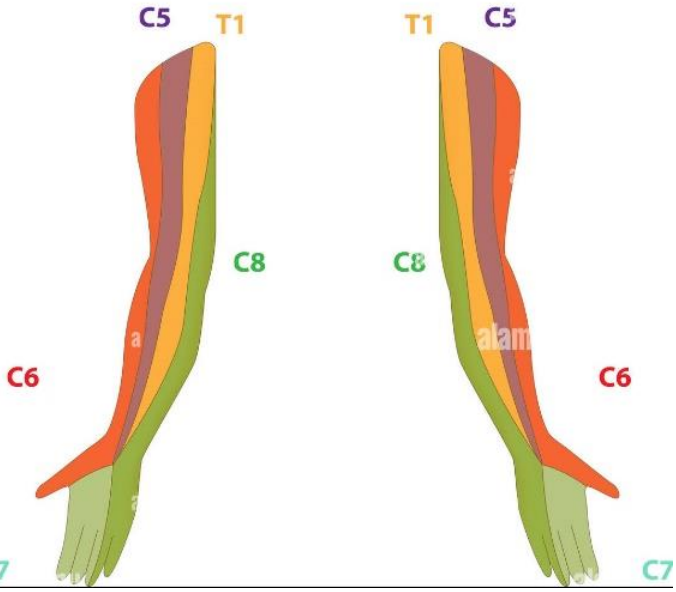
Take permission, ask about pain, **ask him to close his eyes**, then start:

1. **Light touch** : using قطنة , on dermatomal distribution **bilaterally**
2. **Temperature**: using the fork for cold sensation (put it on sternum first so the patient can expect what to feel) then on dermatomal distribution
3. **Pain** : using needle (on sternum first) then dermatomal distribution
4. **Vibration** : using 128Hz fork, on sternum first then on DIP joint, ask the patient if he feels the vibration, if he doesn't, move proximally until he does.
   DIP (finger) > radial styloid (wrist) > olecranon (elbow)
5. **Proprioception** : let him open his eyes and demonstrate on middle finger the upward and downward movements, then ask him to close his eyes again.
   Move the finger upward and downward and ask him to describe the movement.
6. **Graphesthesia** : ارسم على ايده , ask him to describe it.
7. **Stereognosis** : خليه يمسك اشي , ask him to identify it.
8. **Point localization** : touch (كل ايد لحال) and ask which one is touched?

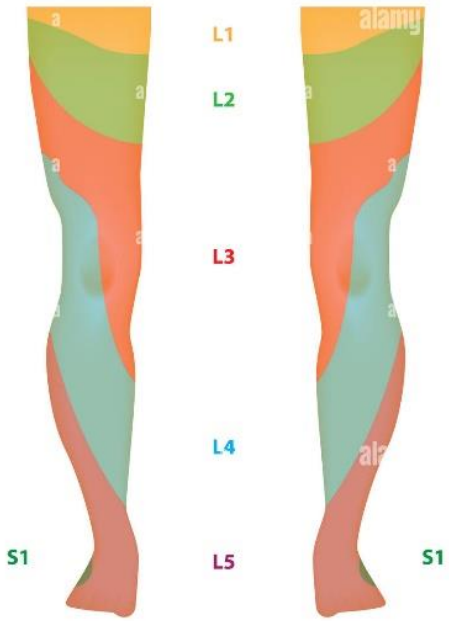
Then touch different fingers (كل اصبع لحال) and ask him after each, 2 fingers is enough.

9. **Sensory inattention** : touch both arms together at the same time and ask him where did he feel the touch. Left? Right? or both?

Say : normal intact light touch and pain sensation , intact temperature sensation , intact vibration & proprioception, no stereognosis, intact point localization, no sensory inattention

Required dermatomes in **upper** limb> 

** if the station was **sensory lower limb** , do everything the same but following the lower limbs dermatomal distribution + on vibration & proprioception use the big toe



Lower limb dermatomes>

Station 8 : Coordination examination (cerebellum function)

1. **Speech** : speak with the patient ☺

   Say : no dysarthria or speech abnormalities

2. **Stance & gait** : ask the patient to stand and take few steps forward + backward, walk tandem gait (heel to toe) , do the Romberg test (stand with feet together + closed eyes)

   Say : Normal stance & gait with no signs of cerebellar or sensory ataxia, negative Romberg sign, no tandem gait.

3. **Eye movements** :

   Move your finger on **H** shape + ask the patient to follow your finger + his head still.

   Say : no nystagmus

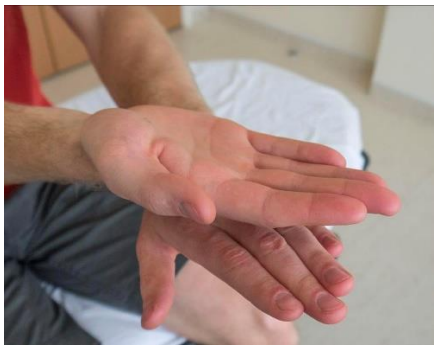
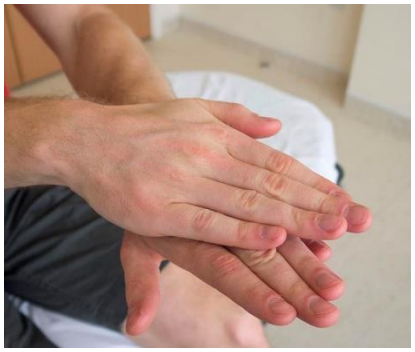
4. **Reflexes** : do the knee reflex only (patellar reflex)

   Say : no pendular reflex

5. **Finger to nose test** : ask the patient to point at your hand then his nose, doing it repeated times while you change your hand's position each time.

   Say : no dysmetria or dyssynergia, no intention tremor or disdiadokinesia

6. **Rapid alternating movements** : Demonstrate patting the palm & back of your hand infront of the patient and ask him to repeat as quickly as possible.

   Say : normal movement with no disdiadokinesia

7. **Rebound phenomenon** : ask the patient to outstretch both arms forward + close his eyes, you push the patients' both hands downward and release it.

   Say : no rebound phenomenon

8. **Heel to shin test** : ask the patient to move his heel along the shin of the other leg and repeat on the other side.

   Say : no dysmetria or dyssynergia and no intention tremor

9. **Apraxia** : ask the patient to do imaginary things or common tasks, 2-3 is enough

   - يشرب شاي
   - يمشط شعره
   - يلبس بلوزة
   - يلف ورقة ويحطها بملف
   - Cycling movement while on bed

Say : no signs of apraxia

Station 9 : cranial nerves examination except optic (vision)

- **Olfactory** :

  1. Check nasal obstruction
  2. Smelling test (scratch & sniff) using scratchable items with odors , ask him to close his eyes + close one nosetril + let him smell with the other

     Say : intact smell sensation

- **Oculomotor / Trochlear / Abducens** :

  Move your finger on **H** shape + ask the patient to follow your finger + his head still.

  Say : eyes have full range of motion , no nystagmus and no diplopia

- **Trigeminal** (V1, V2, V3):

  1. **Sensory** : -light touch -pain

     -sensation from anterior 2/3 of tongue (mention only)

     -nasal tickle test (mention only)

     Say : normal intact light touch & pain sensation

  2. **Motor** :

     - Ask the patient to clench his teeth
     - Open his jaw against your resistance

       Say : no temporalis, or masseter, or pterygoid muscle wasting (mastication muscles) , good bulk of masseter , good power and no jaw deviation.
     - Check corneal reflex (mention only)
     - Jaw jerk : ask him to open his mouth slightly while being fully relaxed , say: normal jaw jerk , no hyperreflexia.

- **Facial** :

  1. **Motor** :

     - Facial asymmetry - ask him to raise eyebrows to check frontalis muscle
     - Close eyes and open them against resistance to check orbicularis oculi
     - Smile + show your teeth (say cheeeese) to check orbicularis oris

- Blow on closed mouth (puff up cheeks) against resistance to check buccinators
- Whistle or purse lips for orbicularis oris
- Protrude the jaw

  Say : symmetrical face, symmetrical wrinkles , no mouth deviation , no ptosis, no abnormal movements, no loss of nasolabial fold

2. **Sensory** :
   - Check corneal reflex (mention only)
   - Taste sensation from anterior $2/3$ of tongue (mention only)

- **Glossopharyngeal & Vagus** :
  - Speak with the patient and say : no dysarthria or dysphonia
  - Blow on closed mouth (puff up cheeks) to check nasal escape
  - Ask him to say aaa , look at the palate & uvula. >say : symmetrical palate with no deviation of uvula.
  - Ask him to cough > say : no bovine cough
  - Gag reflex and general + taste sensation of posterior $1/3$ of tongue (mention only)
- **Accessory** :
  - Palpate sternomastoid muscle for wasting
  - Ask him to rotate his head right & left against your resistance
  - Ask him to tilt his head downward while you resisting him from forehead.

    Say : no sternomastoid wasting + normal power and tone
  - Ask him to elevate his shoulders against your resistance

    Say : no trapezius muscle wasting + normal tone and power
- **Hypoglossal** :
  - Ask him to open his mouth to inspect the tongue

    Say : no involuntary movements or fasciculations

- Protrude his tongue : no deviation
- Move his tongue from right to left and the opposite

  Say : normal tongue range of motion
- Push his cheeks from inside using his tongue while you resisting it from outside > say : normal power
- Swallow > normal swallowing
- say LLLL او يزغرت ☺ > normal speech

Vestibulocochlear nerve

1. **Whispering voice test**

   Say a sentence of your own on a distance of $10-15$ cm away from the patient's ear , then keep going away until 60 cm. go from high > low volume

   Ask the patient if he can hear it and repeat after you

   Say : whispered voice is heard correctly in both ears

2. **Weber test**

   Tuning fork on forehead of patient , ask him in which side can he hear it?

   Say : weber is heard centrally with no lateralization

3. **Rinne test**

   Put the vibrating fork on the mastoid bone, ask if he can hear it, and to tell you if it disappears, once it disappears put it infront of the patient's ear then do the other side.

   Say : positive rinne test bilaterally, Air conduction > bone conduction

Station 10 : optic nerve examination (vision)

Inspection

–eye & orbit –head position –facial & orbital symmetry –swelling & erythema

–ptosis –proptosis = exophthalmous (from behind of the patient)

–lid lag + lid retraction (ask him to follow you finger moving downward)

Say : normal head and eye position , no head tilting , no ptosis or proptosis , no lid lag or lid retraction .

Palpation : permission + eye to eye contact + pain

Palpate around the orbit , say : no periorbital masses or edema

Visual acuity

With Snellen chart (mention only)

Pupils tests:

1. Asymmetry & shape > say : symmetrical regular pupils
2. Direct & consensual light reflexes , move the torch from the temporal area
   Say : normal bilateral pupil reflex to light
3. RAPD (relative afferent pupillary defect) : swith torch between right and left eye quickly (3 sec for each eye)
4. Accommodation : ask him to look at distant object then shift his gaze to a near object (your finger or torch)

Say : symmetrical bilateral pupil constriction to light & gaze, with inward movement of the eyes.

Visual field

Sit infront of the patient with 1m between you.

A. Both eyes open

1. Homonymous defect : move your finger from the lateral to medial
   Ask him to tell you when he sees your finger moving
2. Sensory inattention : first move your right hand, then left hand, then both hands together . and ask him to tell you which side can he see a moving hand

B. One eye closed (then alternate)

1. Peripheral visual field , move your hand from lateral to medial on 4 areas, ask him to tell you when he see it each time
2. Central visual field : use a pen with red hat
3. Color desaturation : ask him to describe the color, saturated or pale, test both eyes if he can the same color bilaterally
4. Blind spot : 15° lateral. Move the pen with the red hat from the centre to the lateral , once it disappears in your vision , ask the patient if he can still see it. If not move more lateral or more medial, once he cant see it, move upward and downward to set its boundaries.
5. Mention : ophthalmoscope exam for optic disk swelling + ishihara for color blindness

The end – good luck everyone