I am Bilal Faeq AL-Hasani from Iraq. I attempted the FRCS Glasgow exam in Jordan 2019, it was my first attempt and, thank God, I passed. I dedicate my success to my family, colleagues, and friends for their help, prayers, and support. I also thank Prof. Chua for his wonderful website, Prof Dr. Muthu and members of his virtual Muthusamy university which were very helpful to me in preparing for the exam.

I recommend the following :

1. Kanski (from cover to cover).
2. AAO (selected topics especially in pediatric and oculoplasty)
3. Ophthalmic surgical procedure by Peter S. Hersh and youtube (you will be asked in different surgical procedure, indications, complications and how you will deal with that complication.
4. For medicine:

   1.Oxford handbook of medicine (emergency chapter) with selective topics form the book.

   2. Kanski edition 6th had chapters (a systemic disease in relation to ophthalmology and ophthalmic side effect of drugs) are very important.

   3. ECG made easy or YouTube for ECG !

You have to read (as much as you can) a past candidates experience from Chua website.

Join prof. Muthusamy Virtual University

(https://www.mvupgo.com/) is very helpful in preparing for the exam.

The viva exam (held on 28th of April 2019)

The first table was an anterior segment, two Arabic examiner one male and the other was female

The first examiner starts with a picture of thickened eyelid margin with loss of eyelashes and symblepharon, he asked me in details about the possible causes.

then he asked me about the definition of pseudoptosis and again in details about the causes. Then he gave a scenario of Marcus Gunn jaw-winking in a child and asked how you will manage this case.

Then he show me a picture of limbal dermoid and asked about the possible association with this and in details how to manage this case.

The second examiner gave a scenario of posterior capsular rupture while you do cataract surgery, she went with a very deep detail in how you will diagnose and how to deal with this(in step by step) and mention all possible treatment options.

She also gave a scenario of zonular dialysis and how to manage the case (if it is less than 90 degrees and if it is larger one) she wants to know every step in the operation and how you will deal with the possible complications.

After I finished all the questions, the first examiner gave me a bonus question, he show me a picture of a child with swelling eyelid with proptosis, I give the possible DDX and go to details of rhabdomyosarcoma.

The second table was a posterior segment (two examiners one English and the other was Arabic)

Start with the English examiner show me a picture of CRAO with patent cilioretinal artery, describe, give the differential diagnosis, how to manage if this patient is old age? (exclude giant cell arteritis) , then if this occurs in a young patient .

Then she give me a scenario of wet AMD she asked about the presentation, the investigation you will send and what to expect, the treatment options available, how to follow up the patient.

She give me a scenario of metallic foreign body entranced the eye while hammering iron, what to find during the examination, what to do if the foreign body is in the vitreous, what to do before you send the patient to the vitreoretinal surgeon (do ct scan)

The Arabic examiner start with a picture of retinopathy of prematurity, describe, when and how to screen, what are the zones? draw it, what are the stages? When to treat? (according to early treatment of retinopathy of prematurity study), treatment options, when to stop treatment? What

is the natural history of you not treat ROP? (all the answers are present in American academy section retina).

Then he show me a picture of Best disease in vitelliform stage, describe? Cause? Inheritance? Investigation? EOG and ERG , what to expect the ERG result? More commonly it is normal as it is macular dystrophy and not the whole retina involved.

Then he asked me about possible causes of metamorphopsia, then the discussion went to the management of epiretinal membrane.

Then the English examiner give me a bonus question, she asked me to draw an OCT with the layers and show the positions of each type of CNV

The last table is the medicine and Neuro-ophthalmic disease (two Indian examiners)

First start with Neuro-ophthalmology with a scenario of benign intracranial hypertension, what are the possible causes? What to send? (MRI then MRV then lumber puncture), ok so what is the opening pressure? (normally less than 24 mmH2O), as ophthalmologist what expect in the examination? (papilledema and 6^{th} cranial nerve palsy), what are the treatment options? All answers are present in the American Academy in neuro section

Then she shows me a picture of a person with multiple skin masses, typical of neurofibromatosis type 1 and the discussion went to the types, ophthalmic manifestations and the importance of diagnosis of optic nerve glioma and how to manage this case

The other examiner who is a physician start with a scenario of Galactorrhea, what is the cause? Pituitary adenoma, what are the ophthalmic manifestations? What is the medical treatment ? if this fails what to do? Refer for a neurosurgeon who will do trans-sphenoid approach to remove the tumor, okay this patient came to you after surgery and complain of polyuria and polydipsia what do you think? A complication of surgery with damage to the postior pituitary gland lobe which normally secretes antidiuretic hormone ADH and the patient develops diabetes insipedus.

He gives me a scenario of a young patient with systemic lupus erythematosus SLE and asked me the diagnosis, what are the ophthalmic manifestations in details, what is the most common ophthalmic manifestation? Dry eye.

Clinical exam (held at the 30th of April 2019)

The first station was the posterior segment, I see three cases here

First slit lamp examination of the fundus of this patient, I use my 90 volk lens and see disc swelling with cotton wall spot and large NVD and NVE with laser mark of previous PRP and macular edema, I exam the other eye which had the same picture. He asked me the finding and the diagnosis, for which I say proliferative diabetic retinopathy with the finding and I give a differential for disc swelling include papilledema and diabetic papillopathy which he interrupted me and asked: do you think in diabetic papillopathy the disc will be elevated like this? I immediately answer no, it may also be malignant hypertension for which he agrees.

The second case to be examined with indirect ophthalmoscopy: it show a large peripapillary area of discoloration with black and white , about 15 disc diameter and the vessels cross it nicely , not elevated , while examination I was confused about the diagnosis as it is strange case and I describe and give a differential diagnosis: it may be coloboma ! he asked do you think it like coloboma? I said no, it may be dysplasia of the Optic disc to which he appears unhappy, then I say it may be a case of combined hamartoma of the retina and retinal pigmented epithelium to which he become very happy and say yes it is! .

The third case: exam the anterior segment of this patient! I exam systematically and while I elevate the upper eyelid there is emulsified silicon (he want to find this) note: you have to elevate the upper lid to see it as many candidates miss it!!

The second station was oculoplasty, I see two cases

First: a straight forward case of simple congenital ptosis. complete examination starts from observation to measurement and give a differential diagnosis

The second case is proptosis also complete examination and measurement by scale and Hertel, do dystopia measurement (inferiotemporal dystopia) asked about differential diagnosis .then asked what a single test to do? (Ct scan)

The third station was anterior segment, I see three cases

First: exam the anterior segment: bilateral keratoprosthesis with glaucoma drainage device. He asked about the diagnosis? it may be due to chemical burn so the standard keratoplasty will have a poor prognosis, he says do you think it is chemical burn! Me: no as the conjunctiva looks healthy. so what do you think in this young adult? (he is 40 year old) me: okay it may be a case of keratoconus with repeated keratoplasy that end with keratoprosthesis. He said but keratoconus had the best result of keratoplasty! I immediately said so it is due to herpes! He says Yes it is herpes

The second case: exam the anterior segment

25-year-old male with aphakia, huge ectropion uveae and there is a fibrovascular white membrane inside. What is your diagnosis? me: can I exam the other eye? yes: it is pseudophakic eye !. While I am confused for the diagnosis I answer: for the left eye: aphakia , large ectropion uveae and fibrovascular membrane and for the right it is pseudophakic and scleral buckle (for this case I don't know the diagnosis so I try to give as much information as I could but with preservation of the time! So I can see three cases! she asked what the cases of ectropian uveae? Me: idiopathic and neovascularization and neurofibromatosis. the examiner asked what else? Me: I don't know! (later after the examination, no candidate know the diagnosis!)

The third case : a young lady

While I exam the case, I became so anxious as everything looks normal!! I Do meticulous examination and while examination the examiner helped me ! what about the zonules! I immediately asked the patient to see from side to side while I exam → there is iridodonesis and we discuss the possible causes and treatment options of subluxated lens. (after first session , they use mydriatic drops so in later examination sesstions it is easily diagnosed!!)

The last station was neuro-ophthalmology, I see two cases:

First case : 10 year old girl with abnormal head posture(left head tilt) and right exotropia

He asked me what is the cause of her abnormal head posture? Me: in general abnormal head posture could be due to musculoskeletal causes or ophthalmic causes. Asked if this is due to

ophthalmic cause , what your explaination? Me: the ophthalmic cause of head tilt most commonly due to forth nerve palsy or Brown syndrome so the patient improve his binocularity but for this case with exotropia (by examination it is alternative exotropia) I had no explaination! The discussion then went to management options for this case.

Second case was an albinism with nystagmus: exam this patient? Me: I describe the nystagmus in primary position:pendular of moderate frequency and amplitude and there is no abnormal head posiure so there may be no null point (the examiner smile and nodding his head), I do ocular motility and describe while I examine the patient: the nystagmus converted to jerk in either side , it is still horizontal in upgaze and downgaze, there is decrease in amblitude in convergence and no increase in frequence or amblitude while I do cover-uncover so no latent component (the examiner looks happy with my examination)then I examine the glasses of the patient (had high refractive error) he asked me the other types of nystagmus? I answered then he asked me why the nystagmus is converted to jerk in either side?! This was diffecult I answer: there is Alexander rule but this was indicate for the increase of frequency and amblituide to the side of nystagmus but for congential nystagmus I don't know, examiner:okay what to expect her VA ? me may be 6/24 or 6/36 , he accepted, he asked what other manifestation of oculocutinous albinism ? me: answered and when I reach to iris transillumination he asked to examine the iris, me :under slit lamp? He: no you can do it with torch, me: okay, I found a clearly transillumination , then the discussion went to management options of this lady.