

Peer Teaching Society Phase 3A Mock SAQ 2023 - [ANSWERS]



Marking Instructions

- There is **no identified 'pass mark'**
- Each question should state the **number of marks** it is worth and what needs to be answered to obtain the mark
- There is **120 marks** in total

Disclaimer

The following paper has been **written by students for students** and **bears no reflection of the real exam**. This is a **learning tool** for students to use at **their own discretion** and this paper has **not been reviewed** by the University of Sheffield.

Please **do not share** this document on **google drives** or **directly to future students** as this takes away from their opportunity to complete this paper in the run up to their exams when it will be of most benefit as a revision resource. **This mock paper will be edited, updated and repeated in future years.**

Chief Exam Editor

Vansh Asher

SAQ Question Contributors

Emily Finbow

Prakhar Gupta

Celia Millar

Dr Olivia Stevens - FY1

Summary of Topics Assessed

Question	Specialty	Topic
1	Paediatrics	Otitis Media
2	Obstetrics	Pre-eclampsia
3	Neurology	Parkinsons
4	Paediatrics	Epilepsy
5	Geriatrics	Falls
6	GP/Public Health	COPD Exacerbation
7	Paediatrics	Asthma
8	Psychiatry	Schizophrenia
9	Sexual Health	Contraception/STI
10	Psychiatry/GP	Depression
11	Gynaecology	Endometrial Cancer
12	GP/Public Health	Measles

QUESTION 1

Jimmy is a 14-month-old child who presents to A&E with his father. His father tells you that Jimmy is usually a very settled child, however in the last 24 hours he has been very irritable, has not been feeding well and has a fever. He lives at home with his parents and his 4-year-old sister. You decide to perform otoscopy on Jimmy. He has a bright red, bulging tympanic membrane on the left, so you diagnose acute otitis media.

- a) List two common causes of acute otitis media in this age group. [2 marks]
2 from: RSV / rhinovirus / adenovirus / influenza virus/ Streptococcus pneumoniae / Haemophilus influenzae / Moraxella catarrhalis / Streptococcus pyogenes
NB 'virus' and 'bacteria' is not specific enough
- b) Anatomically, why are young children more prone to otitis media? [1 mark]
They have short Eustachian tubes / their Eustachian tubes function poorly
- c) If antibiotics were deemed appropriate, what would be prescribed first line, in someone with no allergies and someone with a penicillin allergy? [2 marks]
No allergies: amoxicillin [1 mark]
In penicillin allergy: clarithromycin [1 mark]
- d) A complication of acute otitis media is meningitis, name two new symptoms you would warn parents to look out for? [2 marks]
2 from: Headache / photophobia / vomiting / hypotonia / drowsiness / loss of or altered consciousness / seizures / non-blanching or purpuric rash / neck stiffness
NB not irritability / poor feeding / fever as these are given in question stem
- e) Jimmy's sister has 'glue ear', what type of hearing loss is she likely to have? [1 mark]
Conductive
- f) Jimmy's dad mentions she is awaiting surgery for her 'glue ear', what is likely to be performed? [1 mark]
Grommets / insertion of ventilation tubes / myringotomy

Unfortunately, Jimmy returns to A&E 2 days later as he has become much more unwell. On

examination, Jimmy's left auricle is proptosed and there is significant post-auricular swelling and erythema. He is very drowsy and difficult to rouse. [1 mark]

- g) What complication of acute otitis media has Jimmy presented with?
Mastoiditis

[10 MARKS]

QUESTION TWO

A 41 year old pregnant woman arrives at the maternity triage, she is currently 30 weeks pregnant. She has come in because over the last week she has been experiencing blurring of her vision. This is the patient's first pregnancy and apart from mild asthma she has no significant medical history.

- a) List 4 signs/symptoms that you should enquire about when a pregnant woman presents with blurring of vision [4 marks]
4 from: Headache / visual disturbance or blurriness / nausea and vomiting / upper abdominal or epigastric pain / oedema / reduced urine output / brisk reflexes
- b) You suspect the patient has pre-eclampsia, name one risk factor this patient has? [1 mark]
Increased maternal age or nulliparity
- c) You perform a urine dipstick, what would be the expected result? [1 mark]
Proteinuria

As part of the examination you take the patient's blood pressure, the results comes back as 175/110 mmHG.

- d) State a drug that would be prescribed for this patient to manage their hypertension [1 mark]
Nifedipine
NB: Patient has asthma therefore Labetalol is C/I

8 weeks later the patient arrives by ambulance with her partner after being blue-lighted by ambulance to the maternity department. Her partner found her seizing at home.

- e) As part of the investigation you take a blood test, what results may you find as a result of a complication of this condition [3 marks]
Haemolysis [1 mark]
Elevated liver enzymes [1 mark]
Low platelets [1 mark]

[10 MARKS]

QUESTION THREE

A 62 year old gentleman presents to the GP with a 6 month history of difficulty dressing himself in the morning, notably describing difficulty fastening his shirt buttons. His wife also describes how she feels his walking has changed with him becoming slower and having difficulty standing up from the sofa.

a) What are the 3 cardinal features of this condition? [3 marks]

Resting tremor [1 mark]

Muscle rigidity [1 mark]

Bradykinesia [1 mark]

b) Name 2 differences between the tremor found in this condition and that in a benign essential tremor?

2 from:

- **Essential tremor worsens when holding arms outstretched [1 mark]**
- **Essential tremor worsens with activities such as writing whereas Parkinson's tremor improves with purposeful actions [1 mark]**
- **Essential tremor is often symmetrical where PD is often asymmetrical [1 mark]**
- **Essential tremors has autosomal dominant trait where PD has no genetic trait [1 mark]**
- **Essential tremor is higher frequency than PD [1 mark]**
- **Essential tremor improves with alcohol whereas PD tremor has no change [1 mark]**

c) What is the first line treatment for this patient? [1 mark]

Levodopa (accept Co-careldopa/Co-beneldopa)

d) Name 2 side effects associated with this medication? [2 marks]

2 from: Dry mouth / Anorexia / Palpitations / Postural hypotension / Psychosis / Dyskinesia / Dystonia / chorea / athetosis

e) Name 2 other classes of drugs which could be used in this patient's treatment? [2 marks]

BOTH correct CLASS and EXAMPLE needed to obtain mark

- **Dopamine agonists: Bromocriptine, Cabergoline, Pramipexole, Ropinirole, Rotigotine [1 mark]**
- **MAO inhibitors: Rasagiline or Selegiline [1 mark]**
- **COMT inhibitors: Entacapone, Tolcapone [1 mark]**

[10 MARKS]

QUESTION FOUR

Simon, a 9 year old boy, is brought by ambulance into the medical assessment unit. You receive the following handover from the ambulance crew:

‘Simon is a 9 year old boy who required attention following a possible first seizure. The event was witnessed by his babysitter who said he suddenly fell to the ground and started shaking. She cannot recall any other details about the nature of the seizure. Simon was awake on our arrival, confused but with no neurological deficit. There was no incontinence and no other bodily harm was identified. We have gained peripheral access and given a bolus of 0.9% NaCl, no other medication has been given.’

a) Define a seizure [3 marks]

**Transient episodes [1 mark]
of abnormal [1 mark]
electrical activity in the brain [1 mark]**

b) Give 2 different types of seizures [2 marks]

2 from: Generalised tonic-clonic / Focal / Absence / Atonic / Myoclonic

c) Given the likely diagnosis, what medication could be offered to Simon? [1 mark]

Sodium valproate

Simon does not have another seizure whilst under your care, and you discharge him when his parents arrive.

d) What general advice would you offer them? [2 marks]

2 from: Take caution with swimming / Take caution with heights / To shower rather than have a bath / Record any further episodes / If a seizure lasts more than 5 minutes, or 2 minutes with LOC, call 999

e) On discharge, what follow-up would need to be arranged for Simon? (2)

**An urgent referral [1 mark]
To a paediatric neurologist (within 2 weeks) [1 mark]**

[10 MARKS]

QUESTION FIVE

Lorraine is a 71 year old woman who lives in a bungalow alone. She has been brought to A+E by her daughter who found her on the floor of the bathroom earlier this morning and reports this is her 4th fall in the last 12 months. Lorraine cannot remember why she fell and how she was on the floor. Her PMH includes T2DM, depression and rheumatoid arthritis.

- a) Name 2 risk factors that put Lorraine at greater risk of falls? [2 marks]
2 from: DM / Rheumatoid Arthritis / >65 / Previous falls / Depression
- b) What are the 2 recommended tests from NICE to assess patients at risk of falls? [2 marks]
Turn 180 test [1 mark]
Timed Up and Go Test [1 mark]
- c) Name 2 management options to prevent Lorraine having future falls [2 marks]
2 from: Strength and Balance training / Home Hazard Assessment / Med Review / Vision Assessment

You ask the nurse to catheterise Lorraine and when assessing her urine output, you notice her urine is dark brown/red in colour.

- d) What is the most likely cause of this? [2 marks]
Myoglobinuria [1 mark]
Secondary to rhabdomyolysis [1 mark]
- e) What blood marker would you expect to be high to confirm your diagnosis? [1 mark]
Creatinine Kinase
- f) What would be the treatment of choice for this condition? [1 mark]
IV Fluids

[10 MARKS]

QUESTION SIX

A 58 year old gentleman comes to your GP surgery complaining of increased SOB, a productive cough and generalised fatigue for the last 4 days. He reports having a similar episode last Winter for which he needed a hospital admission. His PMH includes COPD, HTN and a previous MI. He also has a penicillin allergy. You suspect this is an infective exacerbation of his COPD

- a) Name 2 differentials for your current diagnosis? [2 marks]
2 from: Pneumonia / Pulmonary Embolism / Pneumothorax / Pleural Effusion
- b) Name 2 other symptoms that you would expect in patients with infective exacerbations of COPD? [2 marks]
2 from: Wheeze / Fever / Cyanosis / Peripheral oedema / Confusion / Yellow-green phlegm / Drowsiness / Marked reduction in ADLs
- c) Name an appropriate antibiotic for this gentleman? [1 mark]
Doxycycline / Clarithromycin / Azithromycin
NB Patient has penicillin allergy

You review him 4 weeks later where his symptoms are much more well controlled. He states he has been thinking about quitting smoking as he knows it will help his COPD.

- d) What stage of the Transtheoretical Model is he currently at? [1 mark]
Contemplation
- e) What are the 4 other stages of this model? [4 marks]
Pre-contemplation, Preparation, Action, Maintenance

[10 MARKS]

QUESTION SEVEN

A 5 year old, Gemma, attends A&E with her mother. Mum tells you that Gemma has been breathing very quickly for the last hour, and over the last 15 minutes has been getting very sleepy. She is really concerned about her daughter. On examination of Gemma, you notice that she is drowsy, has peripheral cyanosis, and bilateral wheeze. Gemma's respiratory rate is no longer high.

- a) List 4 criteria for life threatening asthma [4 marks]
4 from: PERF less than 33% predicted / Oxygen saturation of <92% / Altered consciousness / Cardiac arrhythmia / Hypotension / Cyanosis / Poor respiratory effort / Silent chest / Confusion
- b) What immediate treatment would you initiate? [1 mark]
Nebulized salbutamol

You administer 3 rounds of nebulized salbutamol and 1 round of nebulized ipratropium bromide. There is very little improvement in Gemma.

- c) What treatment would you give next, if any? [2 marks]
IV [1 mark]
Hydrocortisone [1 mark]

Gemma begins to improve.

- d) What would you monitor whilst awaiting a bed on the ward for her? [2 marks]
Peak expiratory flow [1 mark]
Oxygen saturations [1 mark]
- e) Name the class of drug which Gemma should be prescribed for regular reliever treatment? [1 mark]
Short acting beta-2 agonist

[10 MARKS]

QUESTION EIGHT

Jacob is a 32 year old man who has been brought to the emergency department by the police after being arrested for aggressive behaviour. When taking a history, he states that he has been hearing the voices of his parents who passed away many years ago. You also note he is looking around the room constantly and when questioning this, he reports that he knows everyone around him can hear his thoughts. You read his medical notes and see he has had multiple similar admissions this year and has a family history of psychotic disorders. You suspect a diagnosis of schizophrenia.

- a) Under which Section would the Police have used to bring Jacob to A+E? [1 mark]
Section 136 of the MHA
- b) What aspect of the Mental Health Act could be used to admit Jacob for long-term treatment and which healthcare professionals must be involved to validate this? [2 marks]
Section 3 [1 mark]
2 doctors + AMHP [1 mark]
- c) Name the other first rank symptoms of schizophrenia that Jacob could have presented with? [2 marks]
Delusional disorder [1 mark]
Passivity phenomena [1 mark]
NB: Thought disorders and Hallucinations are already mentioned in the stem
- d) What key risk factor does Jacob have which could suggest a poor prognosis? [1 mark]
FH of psychotic disorder
- e) Name 1 example of an atypical antipsychotic which would be appropriate for Jacob? [1 mark]
Aripiprazole / Olanzapine / Paliperidone / Quetiapine / Risperidone
- f) Name 2 side effects of atypical antipsychotic medications? [2 marks]
2 from: Weight gain / Dyslipidemia / Hyperprolactinemia / Nipple discharge / Impaired glucose tolerance
- g) What non-pharmacological intervention should also be offered to Jacob? [1 mark]
CBT

[10 MARKS]

QUESTION NINE

Claire attends her local sexual health clinic after having unprotected sex two nights before, with a new partner, as she is worried about getting pregnant. Her last menstrual period ended 16 days ago and she is on no form of contraception

- a) Complete the table below [3 marks]

Emergency Contraception Method	Licensed for use within ___ hours of unprotected sexual intercourse
Copper Intrauterine Device	120 Hours
Ulipristal acetate	120 Hours
Levonorgestrel	72 hours

Claire decides to have the copper intrauterine device fitted.

- b) List 2 side effects she should be warned about [2 marks]

2 from: (Short term) spotting or cramping after insertion / heavier periods / more painful periods / infection / it can fall out

Claire returns 2 weeks later concerned that she has a sexually transmitted disease due to a change in her discharge. She tells you it is watery, slightly grey and has an unpleasant fishy odour.

- c) Given the most likely diagnosis, what should be prescribed? [1 mark]

Metronidazole

NB:She most likely has bacterial vaginosis - this is NOT an STI

Whilst she is here, Claire asks about symptoms of sexually transmitted infections.

- d) List a symptom for the infections below [2 marks]

Syphilis: chancre/genital ulcer (solitary, painless, indurated, genital) [1 mark]

Chlamydia: post-coital or intermenstrual bleeding / increased or purulent vaginal discharge / cervical discharge / deep dyspareunia / dysuria / pelvic pain / pelvic tenderness [1 mark]

- e) Aside from being asymptomatic, how may a biological male present with chlamydia? [1 mark]

Dysuria / urethral discharge / urethral discomfort / testicular pain / epididymo-orchitis / reactive arthritis

- f) What is the causative organism of syphilis? [1 mark]

Treponema Pallidum

[10 MARKS]

QUESTION 10

Emily is a 24 year old woman who comes to your practice with her partner Melissa. Melissa reports that Emily has not been quite herself for the last 4 weeks reporting she has been low in energy, had difficulty concentrating and difficulty sleeping. During the consultation, Emily appears very quiet, withdrawn and answers your questions very quietly. Her past medical history includes dysmenorrhoea for which she takes regular Naproxen. You suspect a diagnosis of depression.

- a) Name 2 possible differentials for your diagnosis? [2 marks]
2 from: Bipolar disorder, Psychotic disorders, Premenstrual syndrome, Substance misuse, Hypothyroidism, Anaemia

- b) Name 2 NICE recommended screening tool you might use to help confirm your diagnosis? [2 marks]
2 from: PHQ-9 / HADS / BDI-II

- c) What is the class of drug that would be first line to treat Emily and give an example? [2 marks]
SSRIs [1 mark]
1 from: citalopram, dapoxetine, escitalopram, fluoxetine, sertraline, paroxetine [1 mark]

- d) What medication should also be given to Emily alongside this? [1 mark]
PPI
NB: SSRIs and NSAIDs put her at increased risk of GI bleeding

- e) If Emily was under 16, what medication would be first line to treat her condition [1 mark]
Fluoxetine

- f) When should you organise a review with Emily? [1 mark]
In 1 week (as she is <25)
NB: Symptoms can worsen in first week

- g) How long should Emily be taking her medication for as a minimum? [1 mark]
6 months after symptoms improve

[10 MARKS]

QUESTION ELEVEN

A 70 year old woman, Joanne, presents to her GP with vaginal bleeding. She tells you that her last menstrual period was at age 60 and she reached menarche at 9. She has never had children. You ask her further about her general health and she says that she is usually fit apart from type 2 diabetes for which she takes metformin.

After further investigation this woman is diagnosed with endometrial cancer.

- a) Name 2 risk factors this woman has for endometrial cancer [2 marks]
2 from: Increased age / early menarche / late menopause / nulliparity / T2DM
- b) Name 2 protective factors for endometrial cancer [2 marks]
2 from: COCP / Mirena / Increased pregnancy / Cigarette smoking
- c) Where would you refer this patient to? [1 mark]
2 week wait/Urgent cancer referral to gynaecology
- d) What is the first line investigation for post-menopausal bleeding and what is the next step if there is endometrial thickening? [2 marks]
Transvaginal US [1 mark]
Pipelle biopsy [1 mark]
NB:Accept biopsy on its own

Joanne tells you her friend was recently diagnosed with ovarian cancer and states her GP did a blood test initially.

- e) What blood test is the GP likely to have ordered? [1 mark]
CA-125
- f) Joanne patient is diagnosed with stage 1 endometrial cancer, what is the usual treatment in this case? [2 marks]
Total abdominal hysterectomy [1 mark]
With bilateral salpingo-oophorectomy [1 mark]

[10 MARKS]

QUESTION TWELVE

Joe, a 5 year old boy, comes for an urgent appointment with his mum who is concerned about him. She reports he has been off his food, more irritable than usual and has been having high temperatures for the last 5 days. She reports that since yesterday, he has a rash which started behind his ears and has now spread to his chest, arms and legs. You look in his medical notes and do not see any vaccination history. You suspect he has measles.

- a) What is the most common complication of measles? [1 mark]
Otitis Media
- b) When are children normally vaccinated against measles? [1 marks]
BOTH answers needed for the mark
1 years old AND 3 years and 4 months
- c) As measles is a notifiable disease, who should be notified? [1 mark]
Local Public Health Team
- d) Name 2 other notifiable diseases [2 marks]
2 from: Acute encephalitis / Acute infectious hepatitis / Acute meningitis / Botulism / COVID-19 / Diphtheria / HUS / Group A Strep / Malaria / Meningococcal Septicaemia / Monkeypox / Mumps / Plague / Rabies / Rubella / Scarlet fever / Smallpox / Tetanus / TB / Whooping Cough / Yellow Fever

You have a discussion with the mother about vaccinations using the features of the Health Belief Model.

- e) Name the 4 beliefs individuals must have if they are to change their behaviour according to this model. [4 marks]
Believe are susceptible to the condition [1 mark]
Believe in serious consequences [1 mark]
Believe taking action reduces susceptibility [1 mark]
Believe that benefits of action outweigh the costs [1 mark]
- f) Name 1 other models of behaviour change that this GP could have used in this consultation. [1 marks]
1 from : Theory of Planned Behaviour / Stages of Change / Transtheoretical Model / Social Norms Theory / Motivational Interviewing

[10 MARKS]

[END OF PAPER]

Google Form - Scores and Feedback

- Please record your score - this will enable us to assess how easy or difficult the paper was. Note - All data collected is completely anonymous
- Inform us of any mistakes - Please let us know regarding any spelling mistakes or incorrect answers so we can amend this
- Ask for further clarification - If you have any further questions or want greater explanations, let us know and we'll get on it!

Google Form: <https://forms.gle/dVoDi6cwLu6FhQd88>

We hope you found this paper beneficial for your learning. Good luck for your exams!

Acknowledgements once again to:

- **Vansh Asher**
- **Emily Finbow**
- **Prakhar Gupta**
- **Celia Millar**
- **Dr Olivia Stevens - FY1**