

FACULTY OF FORENSIC & LEGAL MEDICINE

of the Royal College of Physicians of London



Correspondence Address

Suite 416, 1 Alie Street
London E1 8DE

Email: forensic.medicine@fflm.ac.uk

Website: www.fflm.ac.uk

Registered Charity No 1119599

Part 2 MFFLM (GFM) SAQ Sample Questions

Candidates should note that the answers to questions were correct at the time the examination question was used but legislation may have subsequently changed such that some questions/answers may not reflect current legislation/practice.

Question 1

It is a Thursday afternoon and you have been asked to attend the local police station to examine a 3year old boy and record their injuries. When you arrive you are told that the mother is a single mother and that the father has never been identified. The police are concerned that his injuries may indicate NAI (non-accidental injury). You are also told that the mother is in custody on a charge of drunk and disorderly.

The police have requested you to examine the child and to record any injuries. What consent is required for this examination and who may give it? Mention 4 issues (4 marks)

The mother (1) but only after she has regained capacity (1)

The duty Social Worker (1).

If the examination is in the best interest of the child there is no need for consent to be obtained (1)

You observe a variety of **soft tissue injuries**. What features of these might make you suspect Non Accidental Injury?

Re Bruises. Please describe 7 features of bruising that would raise suspicion of NAI. (1 mark each)

- Multiple (1) Fingertip (1), as approx 1 x 1 cm ovoid bruises (1)
- Pinch Mark (1) as butterfly shaped bruise (1)
- Linear bruises (1)
- Petechiae in any location (1)
- Patterned bruising indicating an implement (1).

List 8 anatomical sites more commonly associated with NAI (8 marks)

- Facial (1)
- Perioral (1)
- Ear (1)
- Neck (1)
- Back (1)
- Abdomen (1)
- Inner thighs (1)
- Genitalia (1)
- Buttocks (1)

What research can be relied on for estimating the ages of bruising in children? (3 marks)

- None. Langlois et al did not concern children. It is not possible to estimate the ages of bruising with any accuracy in children. (3)

Mention 10 other types of non-fracture injuries raise suspicion of NAI?

- Traction alopecia (1)
- Multiple (1) old scars (1)
- Burns (1), especially cigarette burns (1)
- Bite marks (1)
- Torn frenulum of tongue (1)
- Ligature marks (1)
- Intra oral injury (1)
- Scalds (1) especially Glove and Stocking (1)

What features of childhood fractures would support the suspicion of NAI? Mention issues of child's age with respect to specific fractures. Mention 9 issues. (9 marks)

- Less than 18 months of age (1)
- Multiple (1) fractures of varying ages (1)
- Rib fractures (1).
- Femoral fracture (1), especially if child not yet walking (1)
- Mid shaft (1) Humeral fracture (1) at less than 3 years (1)
- Skull fractures (1) in infants or toddlers (1)

Following your examination of the child you advise that in your opinion there are signs consistent with non accidental injury. You are told that there have been no previous known problems of this nature. What would you recommend now and what outcomes would you consider to be appropriate? Mention 9 recommendations. (9 marks)

Child to be admitted to hospital (1) for assessment including skeletal survey (1)

Multidisciplinary (1) approach to investigation, involving GP (1), Health Visitors (1), Social workers (1)

If significant cause for concern re NAI, a period of foster care for the child (1) so that the psychosocial and family issues can be assessed (1)

If there are no significant issues identified, child to return of child to the mother (1) under regular Social Services oversight (1) and support (1)

Question 2

John Ferris is taken into custody on a serious charge and you are asked to assess him with respect to FFD and FFI as he has given a history of anxiety and depression and had injuries on presentation to the Custody Sergeant. You arrive and are told the DP has been searched but no tablets or sharp instruments have been found on his custody entry search.

He tells you that he has been attacked by an unknown person that evening with a knife. On examination, you find injuries.

What 7 specific features may make you consider that these injuries were (manipulative) self-inflicted injuries? (1 mark each)

1. Linear incisions or abrasions
2. Grouped and parallel
3. Superficial and of equal depth
4. Avoid vital structures
5. Accessible anatomical sites
6. Mainly caused by the dominant hand
7. Usually appear relatively non-painful
8. No voiced suicidal intent

Detainees with personality disorders may harm themselves on purpose (i.e. “Deliberate Self Harm”) as attention seeking behaviour, for stress relief or as a “cry for help”

How do these injuries typically differ from (manipulative) self-inflicted injuries? Mention 8 issues (1 mark each)

1. More severe and deeper wounds
2. May be bruising and lacerations
3. Of unequal depth
4. May have been apparently painful
5. May have inflicted cigarette burns
6. May be disfiguring
7. Detainees may carry secreted blades
8. Often associated with substance misuse
9. Often history of other forms of self harm, eg drug overdose or attempted self –hanging.

This detainee now tells you that he is going to kill himself. In general what factors associated with Deliberate Self Harm (DSH) may indicate a high risk of suicide? (mention 12 issues; 1 mark each)

1. A medically serious act of DSH
2. Writing a suicide note
3. Having made a plan to kill self
4. Precautions having been taken against being found
5. Stated wish to die
6. Belief that act would have proved fatal
7. Expressed regret that act was unsuccessful
8. Previous DSH
9. Depression
10. Psychosis
11. Substance Misuse
12. Co morbidity
13. Impulsive and aggressive personality traits
14. Social isolation

What 6 specific areas of mental state assessment would you focus on? (1 mark each)

1. His cognitive functions
2. History of self harm
3. Any signs of substance intoxication
4. Somatic signs of depression
5. Indicators of psychosis
6. Plans for the future
7. Drug seeking behaviour

What advice would you give the detention officers re his overnight detention? List 3 issues (1 mark each)

1. Make sure he was well searched for blades
2. Remove all potentially dangerous objects
3. Level 3 obs of Constant CCTV and irregular 15 minute cell visits

Some time later, you are asked to see him again as he is unresponsive in the cell. You find him lying on his back in the middle of the cell floor. His Glasgow Coma Scale is E1V1M5 = 7/15.

What is the most likely cause of this current state? (3 marks)

Question 3

You are asked to appear as an expert witness in a serious case of stabbing. List 8 primary duties as an expert witness? (8 marks)

1. To be independent
2. To provide objective unbiased opinion
3. To only give opinion within your area of expertise
4. To give a balance of opinion of facts that support and refute your opinions

5. To explain when facts fall outside your expertise
6. To explain limitation of data or evidence
7. To communicate any changes of opinion
8. The opinions expressed represent your true and complete professional opinion.
9. To indicated the source of all information I have used.

How would you prepare yourself prior to meeting with counsel in this case? List five issues (5 marks)

1. Analyse all documentation provided to you (1)
2. Research past relevant cases (1)
3. Research relevant (1) and latest edition (1) forensic text books
4. Research up-to-date relevant forensic journals (1)
5. Consider other possible causes of injuries.(1)

List 4 of your main objectives when you meet Counsel? (1 mark each)

1. To understand the relevant legal issues
2. To give an explanation of your opinion on relevant issues
3. To give clear explanation of medical findings in lay terms.
4. Consideration of other possibilities of causation
5. Discuss evidence that supports and does not support your views

The deceased autopsy shows that the tip of the knife had penetrated the inferior vena cava at about the umbilical level and Counsel advises you that he wore size 40 trousers. He shows you a knife with a 3 inch blade and tells that this was the particular weapon. He asks how much force would have been required to penetrate through to the IVC.

How would you advise him? List 4 relevant medical and forensic issues.

1. The IVC is in the centre of the trunk at this level (1) so a 3 inch blade could penetrate quite easily (1)
2. Excluding bone, the skin is the main impediment to the passage of a sharp knife through the tissues,. (1)
3. The only force required is that which breaches the skin. (1)
4. The sharpness of the blade point is the main factor in determining how far a knife sinks into soft tissues. (1)

Who has done the definitive research into the issue of force in stab wounds? (1 mark)

1. Professor Bernard Knight.

Later toxicology shows monoacetylmorphine (6MAM) and phenethylamine (PEA) in urine (but not blood).

What is M6G and what is the significance of finding 6 MAM? (3 marks)

1. 6 Monoacetyl morphine is the detectable metabolite of heroin (1)
2. This indicates that the deceased had taken (1) or been given (1) heroin.

What is (exogenous) PEA (2 marks) and what are their effects (2 marks) ?

1. Substituted amphetamines
2. Often were "legal highs"
3. Extreme stimulants
4. Psychedelics.

What class of drug are they legislated as (1 mark) and under which legislation (1 mark)?
When (to the nearest 2 years) were they made illegal? (1 mark)

1. Misuse of Drugs Act 1971
2. Class A
3. 2002

What is the significance of finding PEA? (3marks)

1. The deceased had taken (1) or been given (1) an amphetamine-based stimulant

What does its presence in urine and not blood suggest? (2marks)

1. The approximate time of ingestion could be estimated.

Question 4

You are a Forensic Physician and have been called at midday to an area of remote woodland where a man in his early twenties has been found hanging by the neck from a tree. The police have found his trousers and under pants in the undergrowth nearby.

As you arrive at the scene you are met by an officer with a clipboard. What 3 pieces of information will he require from you? (1 mark each)

1. Your name
2. Your role
3. Contact information

You are introduced to the investigating officer. List 11 pieces of information information will you require from him? (11 marks)

1. His name and rank
2. Have paramedics attended?
3. Has been scene been changed eg body cut down.
4. Time body found
5. Circumstances whereby the body was found
6. Identity of deceased (if known)

7. Any known PMH or MH issues
8. Any designated approach to the body ie route
9. Any specific precautions required re scene preservation.
10. Any suicide note
11. Drugs / Alcohol at scene
12. Any erotic paraphernalia at scene
13. Any signs of disturbance at scene indicating a struggle

You may assume that life has been declared extinct. You are now ready to approach the body and what final preparations would you make? (2 marks)

1. Protective clothing
2. Note taking material or camera

You discover a man suspended by a rope from a low branch of a tree with his feet just reaching the ground. He is naked from the waist down.

List 5 features that would make you suspicious that this was a homicidal hanging? (5 marks)

1. Signs of a struggle
2. Injuries that are non self inflicted
3. Defence wounds
4. Ligatures at wrists or ankles
5. Inconsistent hypostasis
6. A horizontal neck ligature mark

What 5 features might suggest this was a suicidal hanging? (5 marks)

1. Feasibility that ligature was self tied
2. Ligature mark rises to a suspension point
3. Suicide note
4. Equipment to facilitate self hanging eg a log
5. History of mental illness

Name 10 features might be present which would suggest auto-erotic asphyxia as a cause of death? (11 marks)

1. A release mechanism to the ligature
2. Evidence of previous similar activity
3. Padding to the neck
4. Partial or complete nudity
5. Erotic / pornographic literature at scene
6. Erotic clothing eg rubber
7. Amyl nitrite
8. Binding of the genitalia
9. Self applied gagging / smothering
10. Evidence of masturbation
11. Objects that may have been used for penetration usually via anus.
12. Clothing left neatly folded at scene

Question 5

You are the forensic physician on duty and you are phoned to ask you to attend a police station to take intimate samples from a 23 year old male who is suspected of the rape of a 19 year old male. List 6 questions you would need to ask before setting out. (6 marks)

1. How long ago did the alleged rape take place?
2. Has an Inspector who is not involved in the investigation given authorisation for intimate samples to be taken?
3. Has the detainee agreed to the taking of intimate samples?
4. Has the detainee any objections to being examined by a doctor of your gender?
5. Are there any other concerns about the condition of the detainee?
6. Specifically, is the detainee suffering from any condition which might affect his capacity to consent?
7. Are there the correct forensic kits at the police station?

When you arrive at the police station you are asked to take forensic samples from the detainee. You are told the alleged assault involved penile anal penetration and took place after all the parties concerned had been out drinking at a gay night club the previous night, but that the complainant and suspect had not previously met before this. List 12 samples you would take from the suspect. (12 marks)

1. Head hair
2. Pubic hair
3. Fingernail clippings and/or swabs
4. Control swab unopened
5. Swab shaft of penis and foreskin (wet)
6. Swab shaft of penis and foreskin (dry)
7. Swab coronal sulcus and inner foreskin (wet)
8. Swab coronal sulcus and inner foreskin (dry)
9. Swab glans (wet)
10. Swab glans (dry)
11. Gloves used
12. Blood for toxicology
13. Urine for toxicology
14. Buccal scrapes (x2)

You are told there is a second suspect from the same incident to see. There is effectively no-one else who can see this individual as your colleagues are tied up elsewhere in the city dealing with the aftermath of a football match. List 4 issues you would discuss with the officer in the case with respect to any forensic samples taken from the second suspect.

2 marks each (max 8 marks)

1. There is a risk of cross contamination as you have already taken samples from the first suspect.
2. The best course of action would be to have a separate clinician see the second suspect in a different examination facility.

3. If the latter is not possible and you had to take the samples, cross contamination could be minimised by you having a shower (including your hair) and changing your clothes (including shoes).
4. If the same examination facility were to be used then it must be forensically cleaned between the examination of the two suspects.

You do not take forensic samples from the second suspect as he is seen by another colleague. However, you are asked to see him later that day after interview as he is very agitated. He has told the interviewing officers that he was quite new to the 'gay scene'. He admits to having had penetrative anal sex with the complainant but maintains it was consensual and he used a condom. However, he has alleged that the complainant had penetrative anal sex with him without a condom and now he (the detainee) is concerned that he might have got HIV as a result. List 12 factors you would consider when advising whether or not he should have HIV PEP: (12 marks)

1. Is he HIV positive.
2. Is the penetrating party HIV positive
3. Did penile anal penetration take place within the previous 72 hours
4. Was this a single exposure
5. Was a condom used
6. If a condom was used did it break or come off
7. Did he have any anal/rectal injuries
8. Had he had HIV PEP before
9. Was the detainee found in a high risk situation e.g. unconscious in the street.
10. Does the penetrating party regularly have sex with men
11. Was the penetrating party born in the UK
12. Has the penetrating party lived abroad
13. If the penetrating party was not born in the UK, where was he born
14. If HIV PEP were prescribed is he willing to take medication regularly for four weeks
15. What arrangements can be made for follow up with GUM

The detainee tells you he uses some drugs recreationally. List 4 commonly abused drugs which can interact with HIV PEP (4 marks)

1. MDMA or ecstasy
2. Gammahydroxybutyrate or GHB
3. Methamphetamine
4. Methadone
5. Benzodiazepines