



## The Hong Kong College of Anaesthesiologists

### Final Fellowship Examinations

#### Paper II – Investigations (1-4)

16 August 2021 (Monday)

12:20 – 12:30 hours

#### Instructions:

- This is a question-answer book. Please write your answers in the space provided.
- Write your candidate number on every page of the answer book.
- Use ink or ball-point pen.
- There are 4 questions in this paper, each with multiple parts.
- Answer **ALL** questions. They are worth equal marks.
- For questions with multiple parts, allocation of marks is indicated in the brackets.

1. A 35-year-old man presents to the emergency department having been found collapsed by his girlfriend. His arterial blood result:

pH	7.25	(7.35 – 7.45)
pO <sub>2</sub>	105 mmHg (13.7 kPa)	
pCO <sub>2</sub>	25 mmHg (3.3 kPa)	
HCO <sub>3</sub>	10 mmol/l	(22 – 26)
Base Excess	-15 mmol/l	(-2 to +2)
Sodium	140 mmol	(135 – 145)
Potassium	4.0 mmol	(3.5 – 5.5)
Chloride	100 mmol	(100 – 110)

- i) Calculate the anion gap? (1 mark)

---



---

- ii) Describe the acid-base status. (3 marks)

---



---



---

iii) Suggest 4 differential diagnoses. (4 marks)

---

---

---

2. A 35-year-old female is scheduled for elective cholecystectomy tomorrow. The following results is noted. She volunteered no other significant past medical history.

Prothrombin time (PT)	16 sec	(12 – 16.5)
International Normalized ratio (INR)	1.2	(0.9 – 1.3)
Activated partial thromboplastin time (APTT)	60 sec	(27 – 38.5)
Fibrinogen	2.8 g/L	(2.0 – 4.0)
Platelet count	223 x 10 <sup>9</sup> /L	(150 – 350)

i) What is the abnormality? (1 mark)

---

---

ii) Suggest 3 possible causes of this results. (3 marks)

---

---

---

iii) List 3 further blood tests that could differentiate these causes? (3 marks)

---

---

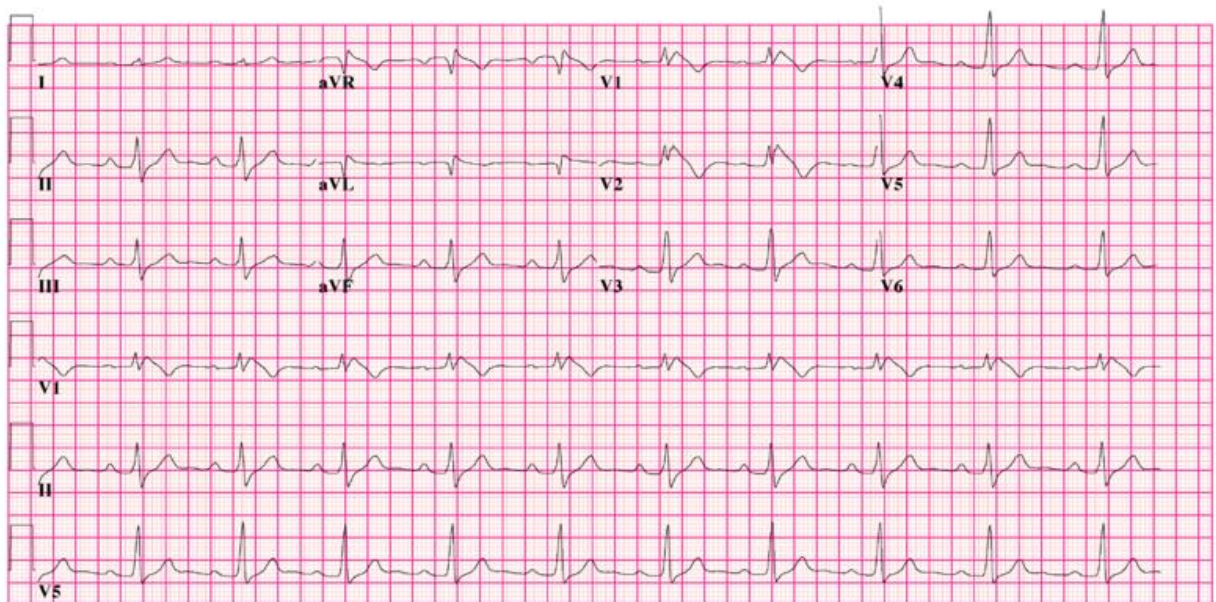
---

iv) What is a mixing study? (1 marks)

---

---

3. A 45 years old man presented to the emergency department for syncope and palpitation. He enjoyed good past health.



i. Name two abnormalities on his ECG. (2 marks)

---

---

ii. What is the diagnosis? (1 mark)

---

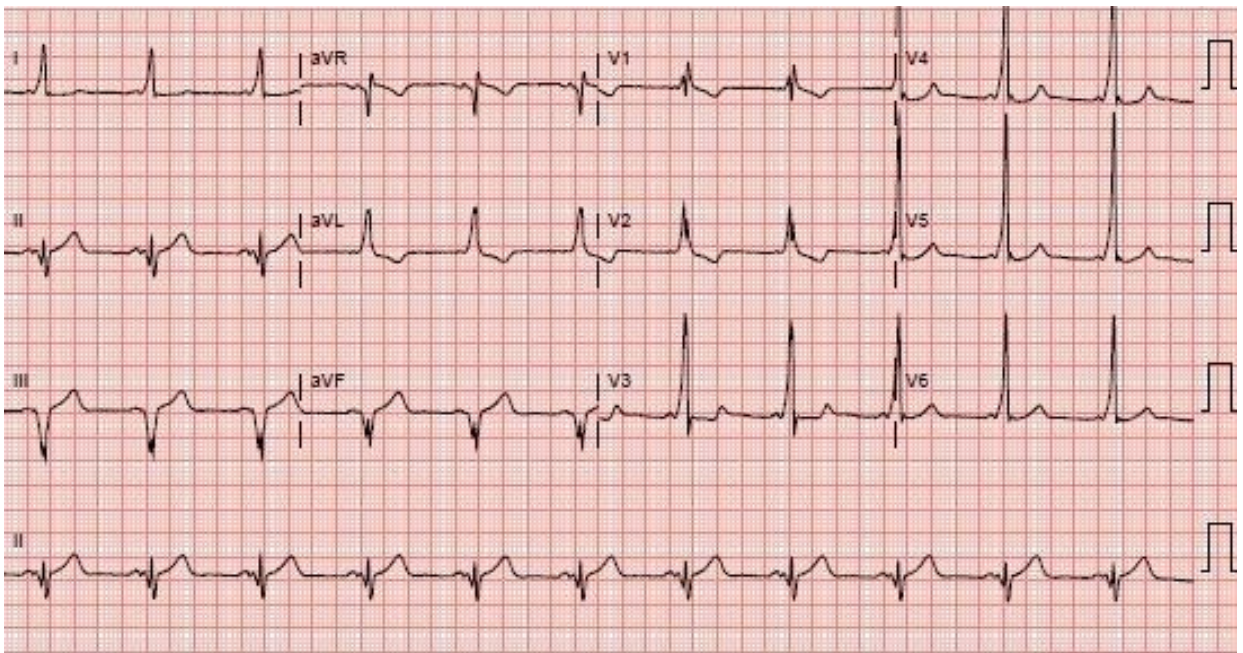
---

iii. What is the treatment? (1 mark)

---

---

4. A 35 years old attended preoperative assessment for knee arthroscopy. He has no significant medical history.



i. Name 3 abnormalities on his ECG. (3 marks)

---

---

---

ii. **What is the diagnosis? (1 mark)**

---

---

iii. **List 2 intraoperative precautions. (2 marks)**

---

---

---

----- End of Paper -----