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25	A	B	C	D	E
26	A	B	C	D	E

27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
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32	A	B	C	D	E
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36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

Dubai Health Authority (DHA)

ECG

ECG Technology - Allied Exam

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Dubai Health Authority (DHA) ECG , each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, ECG
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

SINGLE CHOICE

Which skin preparation step is most important to reduce skin-electrode impedance before placing ECG electrodes?

- ☒ **A** Wiping the skin with isopropyl alcohol and allowing it to dry, with light abrasion if necessary
- ☐ **B** Applying conductive gel only after electrode placement
- ☐ **C** Cooling the skin with an ice pack for 30 seconds before electrode application
- ☐ **D** Moistening the skin with tap water and immediately attaching the electrode

ANSWER A

WHY Alcohol cleansing removes oils and dead skin, and light abrasion further reduces impedance, producing a cleaner baseline and clearer waveforms. Conductive gel must be present at the skin-electrode interface, but skin preparation must precede placement. Ice packing and water moistening do not adequately reduce impedance and can introduce artifacts.

QUESTION 2

SINGLE CHOICE

On a standard 12-lead ECG, the V4 precordial electrode is placed at the:

- ☒ **A** 5th intercostal space, midclavicular line
- ☐ **B** 4th intercostal space, right sternal border
- ☐ **C** 5th intercostal space, anterior axillary line
- ☐ **D** 4th intercostal space, midaxillary line

ANSWER A

WHY V4 is placed at the 5th intercostal space at the midclavicular line. V1 is at the 4th intercostal space right sternal border, V3 is midway between V2 and V4, and V6 is at the 5th intercostal space midaxillary line.

QUESTION 3 SINGLE CHOICE

Which ECG interval is measured from the beginning of the QRS complex to the end of the T wave and reflects total ventricular depolarization and repolarization?

- ☐ A PR interval
- ☒ B QT interval
- ☐ C RR interval
- ☐ D QRS duration

ANSWER B

WHY The QT interval represents the total time of ventricular depolarization and repolarization, measured from the start of the QRS to the end of the T wave. The PR interval reflects AV nodal conduction, the RR interval is the time between consecutive R waves, and the QRS duration reflects only ventricular depolarization.

QUESTION 4 SINGLE CHOICE

A standard ECG tracing is recorded at a paper speed of 25 mm/s. Each large box on the ECG paper therefore represents:

- ☐ A 0.04 seconds
- ☐ B 0.10 seconds
- ☒ C 0.20 seconds
- ☐ D 0.50 seconds

ANSWER C

WHY At 25 mm/s, each small box (1 mm) equals 0.04 s, so each large box (5 mm) equals 0.20 s. This is the standard calibration used in clinical ECG interpretation.

QUESTION 5

SINGLE CHOICE

Which ECG feature is characteristic of atrial fibrillation?

- ☐ A Sawtooth flutter waves at a rate of about 300/min
- ☒ B Irregularly irregular rhythm with absent discrete P waves
- ☐ C Regular rhythm with P waves preceding every QRS complex
- ☐ D Progressive lengthening of the PR interval until a beat is dropped

ANSWER B

WHY Atrial fibrillation is identified by an irregularly irregular ventricular rhythm with absence of distinct P waves (replaced by fibrillatory waves). Sawtooth flutter waves describe atrial flutter, regular P-before-every-QRS describes normal sinus rhythm, and progressive PR lengthening with dropped beats describes Mobitz type I (Wenckebach) AV block.

QUESTION 6

SINGLE CHOICE

ST-segment elevation in leads II, III, and aVF on a 12-lead ECG most strongly suggests acute myocardial injury in which territory?

- ☐ A Anterior wall (left anterior descending artery)
- ☐ B Lateral wall (left circumflex artery)
- ☒ C Inferior wall (right coronary artery or left circumflex)
- ☐ D Septal wall (septal perforator branches)

ANSWER C

WHY Leads II, III, and aVF view the inferior wall of the left ventricle. ST elevation in these leads indicates an inferior wall STEMI, typically due to occlusion of the right coronary artery (or, less commonly, a dominant left circumflex). Anterior wall injury is seen in V1–V4, lateral in I, aVL, V5–V6, and septal in V1–V2.

QUESTION 7

SINGLE CHOICE

A 60 Hz (cycle per second) interference pattern with a fine, regular baseline oscillation is most commonly caused by:

- ☐ A Patient tremor or shivering
- ☒ B Loose electrode contact and electrical interference from nearby equipment
- ☐ C Incorrect paper speed setting
- ☐ D Improper standardization calibration of the machine

ANSWER B

WHY AC interference at 50/60 Hz (mains/line interference) produces a fine regular baseline oscillation and is caused by electrical interference, often worsened by loose electrodes, broken lead wires, or ungrounded equipment near other electrical devices. Patient tremor causes an irregular coarse artifact, paper speed changes distort intervals, and incorrect standardization shows a tall or short calibration pulse.

QUESTION 8

SINGLE CHOICE

On a standard 12-lead ECG, the QRS is positive in lead I and negative in leads aVF and II. This indicates:

- ☐ A Normal axis
- ☐ B Right axis deviation
- ☒ C Left axis deviation
- ☐ D Extreme (indeterminate) axis

ANSWER C

WHY Left axis deviation is present when the QRS is positive in lead I but negative in aVF (and often in II). Right axis deviation shows a negative QRS in lead I with a positive QRS in aVF. Normal axis is positive in both leads I and aVF.

QUESTION 9

MULTIPLE CHOICE

Which of the following are common causes of baseline wander or drift on an ECG tracing? (Choose two.)

- ☒ **A** Patient movement or respiration
- ☒ **B** Loose or dry electrode-skin contact
- ☐ **C** Application of the standard 1 mV calibration pulse
- ☐ **D** Correct placement of all four limb leads

ANSWER **A • B**

WHY Baseline wander is typically caused by patient motion (including respiration causing thoracic movement) and by poor electrode contact such as loose or dried-out electrodes. The calibration pulse and correct limb lead placement do not produce baseline drift.