



Certified IoT Solutions Engineer (CIOT)

Ten Sample Questions

These ten questions are written at the difficulty of the live exam. Six carry a figure, a data table, a configuration or a code listing; four are plain scenario questions, as on the live paper. Every one is a scenario a working IoT solutions engineer would meet, and none of them appears in the live question bank.

The live exam is multistage adaptive: how you score on one stage selects the difficulty of the next, so no two candidates sit the same paper. It is a performance-based exam: each form can carry up to 5 to 12 performance-based questions alongside the multiple-choice questions, which means you build, sequence or complete something rather than only choosing from a list. Answers and full explanations follow each question here; the live exam does not disclose item-level answers.

Question 1

Domain 1: IoT Foundations and Architecture

DATA

Emma Wilson maps each layer of a reference IoT stack to its function, with one function missing.

Layer	Function
Perception	Sense and actuate
Network	(to choose)
Processing	Filter and analyse
Application	Deliver user value

Table 1.1 Stack layers and function.

What is the network layer function?

- ☐ A Store every record set
- ☐ B Transport the data
- ☐ C Render dashboards
- ☐ D Power the sensors

Correct answer: B

The network layer carries readings from the devices toward processing and the cloud, so its function is to transport the data. Storage, dashboards and powering the hardware belong to other layers of the stack.

Question 2

Domain 2: Devices, Sensors and Embedded Systems

DATA

James Carter matches each sensor to the quantity it measures, with one entry missing.

Sensor	Measures
Thermistor	Temperature
Accelerometer	(to choose)
Photoresistor	Light level
Hygrometer	Humidity

Table 2.1 Sensors and measured quantity.

What does the accelerometer measure?

- ☐ A Motion and tilt
- ☐ B Ambient sound level
- ☐ C Air pressure reading
- ☐ D Battery charge

Correct answer: A

An accelerometer senses acceleration, so it reports motion and tilt of the device. Sound, air pressure and battery state are measured by other components, not by an accelerometer.

Question 3

Domain 3: Connectivity and Protocols

DATA

Olivia Davis compares messaging protocols by their best fit, with one row missing.

Protocol	Best for
MQTT	Publish subscribe
CoAP	(to choose)
BLE	Short range links
LoRaWAN	Long range low rate

Table 3.1 Protocols and best fit.

What is CoAP best suited for?

- ☐ A Video streaming
- ☐ B Bulk file backup
- ☐ C Mains powered hubs
- ☐ D Constrained REST

Correct answer: D

CoAP is a lightweight request response protocol built for constrained devices, so it suits constrained REST style exchanges over UDP. Streaming, bulk transfer and mains powered assumptions do not describe its design.

Question 4

Domain 4: IoT Data, Edge and Cloud

CONFIG

Liam Anderson lists the MQTT telemetry topics published by two floors of sensors.

```
site/floor1/temp    22.4
site/floor1/humid   48
site/floor2/temp    23.1
site/floor2/co2     540
```

Listing 4.1 Published telemetry topics.

Which filter subscribes to every floor temperature?

- ☐ A site/floor1/temp
- ☐ B site/floor2/all
- ☐ C site/+ /temp
- ☐ D site/floor2/#

Correct answer: C

The plus sign is the single level wildcard, so site/+ /temp matches the temp topic on any floor. A fixed floor path only covers one floor, and the hash wildcard would pull every topic under a branch, not just temperature.

Question 5

Domain 5: IoT Security

DATA

Ava Thompson maps each security control to its purpose, with one purpose missing.

Control	Purpose
Device certificate	(to choose)
Secure boot	Verify firmware start
Segmentation	Isolate device traffic
TLS	Protect data in transit

Table 5.1 Controls and purpose.

What is the device certificate purpose?

- ☐ A Prove device identity
- ☐ B Boost the data rate
- ☐ C Lower the unit cost
- ☐ D Compress the raw payload

Correct answer: A

A device certificate binds a trusted identity to the device so the platform can prove device identity during authentication. Data rate, unit cost and payload size are unrelated to what the certificate establishes.

Question 6

Domain 6: Solution Design, Deployment and Operations

CONFIG

David Brown lists the staged plan for pushing a firmware update to a device fleet.

```
Stage 1  pilot 10 devices
Stage 2  canary 5 percent
Stage 3  phased rollout
Stage 4  full fleet update
```

Listing 6.1 Staged update plan.

Which approach updates a small live share first to catch faults?

- ☐ A Full fleet update
- ☐ B Canary release
- ☐ C Manual reflash
- ☐ D Pilot hardware build

Correct answer: B

A canary release ships the update to a small share of live devices and watches for faults before wider rollout. A full fleet update removes that safety net, and a manual reflash or hardware build does not describe a staged production check.

Question 7

Domain 1: IoT Foundations and Architecture

A team connects thousands of sensors straight to one central cloud with no local compute, and bandwidth cost and latency climb. What best addresses this?

- ☐ A Add more sensors
- ☐ B Remove the cloud tier
- ☐ C Process at the edge
- ☐ D Poll devices faster

Correct answer: C

Moving work closer to the source lets the team process at the edge, filtering and aggregating readings so less raw traffic reaches the cloud and latency falls. Adding sensors or polling faster increases load, and removing the cloud tier discards needed central services.

Question 8

Domain 2: Devices, Sensors and Embedded Systems

A battery node lasts only a few days because its radio sends a reading every second even though the value rarely changes. What best extends battery life?

- ☐ A Raise the sample rate
- ☐ B Add a bigger antenna
- ☐ C Use a faster CPU core
- ☐ D Sleep between reads

Correct answer: D

The radio dominates power draw, so letting the node sleep between reads and transmit only on change or on a slower schedule saves the most energy. A faster core, bigger antenna or higher sample rate would draw more power, not less.

Question 9 Domain 4: IoT Data, Edge and Cloud

An edge gateway forwards telemetry as it arrives, but when the link drops the readings are lost and gaps appear in the cloud history. What best prevents the loss?

- ☐ A Store and forward
- ☐ B Drop old readings
- ☐ C Send only averages
- ☐ D Widen the sample gap

Correct answer: A

A store and forward buffer keeps readings on the gateway during an outage and replays them once the link returns, so no data is lost. Dropping readings, averaging or sampling less all discard detail rather than protecting the history.

Question 10 Domain 3: Connectivity and Protocols

City meters spread over many kilometres run on coin cells and send small readings a few times per hour. Which connectivity choice best fits?

- ☐ A Wired Ethernet drops
- ☐ B Short range BLE mesh
- ☐ C Low power wide area
- ☐ D High speed Wi-Fi 6

Correct answer: C

A low power wide area network carries small payloads over long distances on very little energy, which matches meters on coin cells sending a few readings per hour. Ethernet needs cabling, BLE reaches only metres, and Wi-Fi drains a coin cell far too fast.