How to Really Mine Bitcoin – Quiz

10 Multiple-Choice Questions

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BSc Blockchain, Crypto Economy & NFTs

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Quiz Questions 1–5

Q1. What is the primary purpose of Bitcoin mining?
A) Create new Bitcoin wallet addresses B) Validate transactions and create new blocks
C) Encrypt transactions for privacy D) Store a copy of the blockchain

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Q2. What does a miner change repeatedly when searching for a valid block hash?
A) The previous block's hash B) The transaction amounts
C) The nonce in the block header D) The block reward size

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Answer: C – The nonce is a 32-bit counter in the block header that miners increment with each attempt.

Q3. A miner has found a valid block when...
A) The nonce reaches exactly 4,294,967,295 B) The SHA-256 hash of the block header is numerically below the target
C) The hash starts with the letters "BTC" D) The block contains at least 1,000 transactions

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Answer: B – A valid block requires a hash below the target value. The lower the target, the harder it is to find.

Q4. When comparing ASIC miners, which metric matters MOST for profitability?
A) Total hashrate in TH/s B) Physical weight of the machine
C) Efficiency in joules per terahash (J/TH) D) Number of fans

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A) Every single block B) Every 2,016 blocks (approximately every two weeks)
C) Once per year on January 1st D) Only when a halving occurs

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Answer: B – Difficulty adjusts every 2,016 blocks to keep the average block time at approximately 10 minutes.

Quiz Questions 6–10

Q6. Why do most individual miners join mining pools instead of mining solo?
A) Mining pools provide free electricity B) Solo mining is illegal in most countries
C) Solo mining has an extremely low probability of ever finding a block D) Pools increase the total block reward

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Q6. Why do most individual miners join mining pools instead of mining solo?
A) Mining pools provide free electricity B) Solo mining is illegal in most countries
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Answer: C – A single ASIC has roughly a 1-in-40,000-year chance of finding a block. Pools provide steady income.

Q7. Which ongoing cost has the LARGEST impact on mining profitability?
A) Internet bandwidth B) Pool membership fees
C) Bitcoin wallet software D) Electricity

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Answer: D – Electricity is 60–80% of ongoing mining costs. Location (cheap power) determines profitability.

Q8. On your mining dashboard, a high rate of rejected shares most likely indicates...
A) Your ASIC is too powerful for the pool B) A network connectivity issue or stale work from the pool
C) You are earning more Bitcoin than expected D) The Bitcoin price has dropped

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Q9. In the FPPS (Full Pay Per Share) payout method, miners receive...
A) Payment only when the pool successfully mines a block
B) Payment for each valid share submitted, including estimated transaction fees, regardless of whether the pool finds a block
C) A fixed monthly salary set by the pool operator
D) All transaction fees from blocks they personally validated

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Answer: B – FPPS pays per share plus an estimate of tx fees, providing the most predictable income.

Q10. What is the correct order for setting up a Bitcoin mining operation?
A) Research hardware → Calculate profitability → Set up wallet → Join pool → Configure ASIC
B) Buy hardware → Mine solo → Join pool if unsuccessful
C) Download app → Start mining on phone → Transfer to wallet
D) Join pool → Let pool choose hardware → Receive ASIC by mail

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Answer: A – Always research and calculate profitability BEFORE purchasing hardware.