Intensive I – Multiple Choice Questions - 30

1. What is needed to get up and running with Bitcoin?
   1. The standard Bitcoin client.
   2. Mining Software
   3. A wallet
   4. All of the above
2. What is the fastest and most effective way of mining Bitcoins?
   1. CPU Mining
   2. ASIC Mining
   3. GPU Mining
   4. Cloud based mining
3. Which of the following statements is false about Bitcoin proof of work?
   1. The idea is to solve a Crytographic puzzle, keep guessing until the required target is reached
   2. The problem is very hard to solve and requires that the miner spend money in the way of electricity
   3. The block once solved is very hard to verify as well keeping the integrity of the system by this.
   4. The proof of work algorithm is fundamental to ensuring people stay honest and do not cheat, given that parties are anonymous and unknown.
4. What is one of the biggest limitations of the Bitcoin network and mining?
   1. The use of electricity
   2. The storage space required to store the blocks
   3. Transaction processing time
   4. The Block reward of Bitcoins not being high enough
5. What are some alternative Consensus mechanisms to Proof of Work that consume less electricity
   1. Proof of Stake
   2. Proof of Authority
   3. A hybrid Proof of stake and proof of work model
   4. All of the above
6. Which of the following describes a major issue with mining power currently?
   1. Mining power seems to be clustered in a few countries in large pools with true distribution not being achieved.
   2. Mining power is spread evenly across the world which makes it hard to trace the origin and keep accountability.
   3. Mining is under the control of hobbyists who may drop out of the mining of the network which will lead to problems.
   4. Mining is based on the use of ordinary PC's which consume huge amounts of electricity and generate huge amounts of heat.
7. What is the aim of the Lightning network in the Bitcoin world
   1. To earn fees for the developers of the network thorugh the increased number of transactions.
   2. To make transactions faster and increase throughput by using payment channels
   3. To increase the number of transactions per block by increasing the block size
   4. To make transactions off chain so that the main blockchain does not have full transparency of the transactions and anonymity is maintained.
8. Which is the below is not true about Bitcoin Script?
   1. Bitcoin Script is the language used for transaction processing.
   2. A virtual processor interprets the scripts and performs actions
   3. All bitcoin transactions have script embedded in the input and output
   4. Script does not always terminate and has loops.
9. What is the recommended number of blocks to wait before ruling out a double spend attack as a possibility?
   1. 1
   2. 6
   3. 2
   4. 12
10. When does the reward halving occur in the Bitcoin network?
    1. Every 150,000 blocks
    2. Every 11,000 blocks
    3. Every 210,000
    4. It is determined by the development community by vote
11. Which of the following statements about mining reward is not accurate
    1. The profit from mining goes down as the difficulty goes up
    2. The profit from mining goes up as the difficulty goes up
    3. The profit from mining goes down as electricity prices go up.
    4. The profit from mining goes down as hardware costs rise
12. Which country has the largest concentration of mining power in the world currently?
    1. China
    2. USA
    3. Iceland
    4. Georgia
13. Which of the following is not a factor in merchants acceptance of Bitcoins?
    1. Bitcoin Price Volatility being very high
    2. Understanding of the Bitcoin currency
    3. Negative press from noted hacks and illegal activities in Silk road
    4. Transaction costs in the Bitcoin network
14. Which of the following regulatory or tax rules are not true in relation crypto currency?
    1. Increasingly exchanges where you can trade cryptocoin are regulated and have KYC / AML rules in place
    2. Any income made using cryptocoins are liable to pay tax just the same as fiat currency.
    3. Trading income from trading cryptocoins is not liable for tax and is explicitly exempt.
    4. Mining income is liable to income tax in much the same way as any other income.
15. Why are there concerns around the governance of the Bitcoin network?
    1. There are fears that the core code is controlled by a small group of core developers
    2. There are fears that there are a small number of miners who are exerting too much power due to their control of the hash rate
    3. There are conflicts which are not being resolved in an open, effective and transparent manner which undermines the currency.
    4. All of the Above
16. Which of the following statements about Ethereum is true?
    1. It is a private Blockchain for running decentralized applications
    2. It is capable of running Smart contracts that are Turing Complete
    3. It was invented by Satoshi Nakamoto
    4. It was funded by Venture Capitalists to the tune of $18 million
17. What is the Ethereum Virtual Machine?
    1. It is a virtual machine system that can run bytecode in every node to create consistency across the system wherever a contract is run
    2. It is a super computer that runs all the smart contract code in a central location
    3. It is not a Turing complete system and cannot run loops
    4. It is a series of powerful computers that execute smart contract code that is written to run on the Ethereum blockchain
18. Why is gas required in the Ethereum network to run smart contracts?
    1. To compensate people who are running nodes for the use of their compute power
    2. To ensure that infinite loops are not run on an Ethereum Virtual Machine – once the gas runs out the contract will stop running
    3. The need for gas also acts as a security measure making attacks very hard due to the cost involved in spamming and infinite loops
    4. All of the above
19. What are Smart Contracts?
    1. Computer code that will verify and execute the terms of contracts automatically
    2. Computer code that will execute a set of instructions automatically
    3. Contracts that make sound business sense and are recorded ona blockchain
    4. All code on a blockchain can be referred to as a smart contract.
20. What is the Proof of Stake consensus algorithm?
    1. It is a way to ensure that only trusted participants are on boarded onto a network and own a stake in the network
    2. It is a system based on Practical Byzantine Fault Tolerance and achieves consensus through participants owning a token
    3. Its is a randomly distributed consensus algorithm where any node can be chosen at random irrespective of their size.
    4. The consensus mechanism works on the basis of a pre determined white list of participants
21. What is the major advantage of the Blockchain in terms of data storage?
    1. Anyone can verify that you stored some data using your cryptographic signature.
    2. The data can only be unlocked by the person who stored the data with their private key
    3. The data is replicated across every node in the network creating redundancy.
    4. All of the above.
22. Why is Blockchain technology potentially so important in the payments and remittances area?
    1. It can bring transaction costs down and facilitate financial inclusion.
    2. It can open up new markers for the banking system
    3. It can increase profits for the banking system
    4. It allows for greater transaction costs to be charged with a lower cost base
23. Which of the following is a good use case for Colored Coins?
    1. Smart Property
    2. Digital Collectibles
    3. Securities Issuance
    4. All of the above
24. What is central to voting being possible on a Blockchain based system?
    1. Government Policy
    2. Managing identity on a blockchain system
    3. Public education on the technology
    4. The technology to become cheaper
25. Why does the use of Blockchain potentially revolutionise the area of Land registration and ownership?
    1. Allows governments to have tighter control on ownership records
    2. Centralisation of records and control by one party can be achieved
    3. A distributed, immutable store will mean records are tamperproof and trustworthy thereby reducing corruption
    4. Makes the buying and selling of property and land much cheaper and more accessible than currently
26. Which of the following is NOT a good use case for time stamping of records?
    1. Proof of task completion
    2. Time stamping Intellectual property
    3. Using for proving contract date signature
    4. Maintaining calendars and schedules
27. Which of the following are important initial steps in preparing your firm for the use of Blockchain technology?
    1. Learning and increasing knowledge about the technology
    2. Educating and disseminating this knowledge within the organization
    3. Playing with the technology and building solutions to solve problems
    4. Devising a firm wide strategy and approach
28. Which of the following should not be a critical criteria for a firm in adopting blockchain technology?
    1. Programming Language of the blockchain framework
    2. Cost of implementation
    3. Interoperability with other systems
    4. Scalability
29. Which of the following are very important when thinking about scalability?
    1. Understanding usage patterns – peak usage times and loads.
    2. How will usage grow over time?
    3. What are the performance requirements for your use cases?
    4. All of the above
30. Which of the following is NOT a concern with regards to interoperability?
    1. Legacy / Existing systems and how they will interact with each other
    2. Does the system have adequate permissions in place to control access?
    3. Will it be easy to extract data in some common format?
    4. Will it be possible to meet any regulatory requirements within the system

Key – 1D, 2B, 3C, 4A, 5D, 6A, 7B, 8D, 9B, 10C,11B, 12A, 13D, 14C, 15D, 16B, 17A, 18D, 19A, 20B , 21D, 22A, 23D, 24B, 25C, 26D, 27C, 28A, 29D, 30B