**Pre-Induction Assessment Test Questions**

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| **Sn** | **Question** | **Options** | **Ans** |
| 1 | Which of the following is not a Software development process? | a) Object Oriented Software Development  b) Rapid Application Software Development  c) Six Sigma  d) Prototyping Software Development | c |
| 2 | What are the types of Version Control System? | a) Distributed VC and Cloud VC  b) Centralised VC and Network VC  c) Centralised VC and Cloud VC  d) Distributed VC and Centralised VC | d |
| 3 | Iteration in Agile Development is? | a) A specified timeframe for releasing new versions of a software application.  b) A specified timeframe for completion of software project.  c) Usually between 4 and 6 weeks.  d) Both a) and c) | b |
| 4 | The amount of work that can be accompanied by an Agile team during a single iteration is known as? | a) Efficiency  b) Veracity  c) Velocity  d) Volume | c |
| 5 | Which of the following is not a role in Scrum? | a) Product Owner  b) Development Team  c) Scrum Master  d) Testing Team | d |
| 6 | Crystal Methods are a family of? | a) Development methods  b) Agile methodologies  c) Testing methodologies  d) Quality Control methods | b |
| 7 | Key aspects of Software Development for DevOps? | a) DevOps processes are optimized to react to frequent software changes.  b) Support target servers/devices that are expected to work.  c) Underpinning services required by DevOps process to succeed.  d) Both a) and c) | d |
| 8 | Which of the following is/are fundamental DevOps Principle? | a) Principle of flow  b) Principle of feedback  c) Principle of Continual learning  d) All of the above | d |
| 9 | Which of the following is not a Lean Development principles? | a) Eliminate waste  b) Build quality  c) Knowledge sharing  d) Deferring commitment | c |
| 10 | Principle of flow in DevOps is | a) How to have transition from development to operation, keeping in mind iteration.  b) To provide fast feedback loop at every step of the flow.  c) Both a) and b)  d) None of the above | c |
| 11 | Characteristics of **Kanban** are? | a) Workflow transparency and focus on completion  b) Reducing stress for faster development and increase customer satisfaction  c) Both a) and b)  d) None of the above | c |
| 12 | Which of the following is true about features of **Brownfield** DevOps? | a) Brownfield DevOps adoption is quite slow, but it is more reliable and scalable in nature.  b) It uses Composable tools  c) Brownfield Development starts from beginning.  d) It is cloud-platform enabled. | a |
| 13 | Principles of Micro-services are | a) Modelled around business domain  b) Hide implementation details  c) Independent deployment  d) All of the above | d |
| 14 | Which of the following is not used as an Exploit tool by Hackers? | a) WIRE SHARK  b) NMAP  c) Nemesis  d) Mock Flow | d |
| 15 | Program where individuals are invited by software and website developers or Govt to disclose the bugs or flaws in their IT System & gets rewarded | a) Bug Bounties  b) Social Engineering  c) Ransomware  d) State Sponsored Hacking | a |
| 16 | DRaaS is | a) Data Recovery as a Service  b) Database Recovery as a Service  c) Data Recovery as a Solution  d) Disaster Recovery as a Service | d |
| 17 | Term RTO (Recovery Time Objective) is? | a) Maximum tolerable downtime  b) Maximum acceptable amount of data loss  c) Related to Data Backup Frequency  d) All of the above | a |
| 18 | Which among the following is not an Agile Development Values? | a) Individuals and Interactions  b) Welcome Change  c) Customer collaboration  d) Responding to Change | b |
| 19 | Correct Sequence of process in Agile Project Management Model? | a) Envisioning, Speculating, Adapting, Exploring, Closing  b) Exploring, Envisioning, Adapting, Speculating, Closing  c) Envisioning, Speculating, Exploring, Adapting, Closing  d) Exploring, Envisioning, Speculating, Adapting, Closing | c |
| 20 | Scrum Framework is related to? | a) Agile Project Management Model  b) Waterfall Model  c) Spiral Model  d) Prototype Model | a |
| 21 | Project Charter should include following elements? | a) A vision statement, object or mission of the project, customer problem.  b) Success condition or criteria, priorities and compromises, risks & mitigation & team roles.  c) Both a) & b)  d) None of the above | c |
| 22 | Release planning stage in Agile consists of? | a) A plan for delivering a certain increment of product or business value by target release date  b) It helps stakeholders start to set expectations on what they can start to see within each iteration as they approach the final release.  c) It includes establishing project goals, creating user stories, prioritizing stories so that the team and stakeholders identify what must be developed, estimating stories, group stories and setting a release date.  d) All of the above | d |
| 23 | MoSCoW method is a tool that is used to? | a) Help a team in prioritizing user stories  b) Test the use cases  c) Debug the code  d) Check Coding Standards | a |
| 24 | What is ‘R’ stands in Release Plan CRUD operations? | a) Release  b) Read  c) Run  d) Revoke | b |
| 25 | Which database concept describes the structure inside the database? | a) Metadata  b) Records  c) Container  d) Rows | a |
| 26 | In relation to Database what is a specific set of tuples in a relational database architecture? | a) Relation Schema  b) Relation Instance  c) Tuple  d) Relation Key | b |
| 27 | Which database file type is used as a recovery process when the database falls? | a) PRIMARY  b) LOG  c) FILENAME  d) FILEGROWTH | b |
| 28 | Which description accurately describes a basic SQL Statement? | a) Retrieves records by providing specific procedural instructions.  b) Retrieves records by performing step-by-step instructions.  c) Retrieves records by executing top-down instructions.  d) Retrieves records by describing what it is you want to see returned. | d |
| 29 | Which numerical data type has a precision of 2(2^16)? | a) INT  b) FLOAT  c) SMALLINT  d) TINYINT | b |
| 30 | Which is NOT a Chronological and Interval Data Types in SQL? | a) REAL  b) DATA  c) INTERVAL  d) TIMESTAMP | c |
| 31 | You want to remove a PRIMARY KEY you added to a column in an existing table. Which two SQL statements would you use to do this? | a) ALTER TABLE and DROP PRIMARY KEY  b) INSERT TABLE and DROP PRIMARY KEY  c) ALTER TABLE and DROP CONSTRAINT  d) INSERT TABLE and DROP CONSTRAINT | a |
| 32 | Which of the following SQL Constraints ensures that a column has a Unique Identity and NOT NULL? | a) PRIMARY KEY  b) DEFAULT  c) FOREIGN KEY  d) UNIQUE | a |
| 33 | Which of the following statements is true regarding the SQL INSERT INTO statement? | a) Can only be used to insert integer data type values  b) Can only be used to insert a single record  c) Can only be used to specify values to be inserted  d) Can be used to specify both the column names and the values to be inserted. | d |
| 34 | When would you need to include square brackets around the name of a table within a SELECT statement (in SQL Server) | a) When the values within the columns of the table all have numerical data types  b) When the name of the table contains two words with a space in between.  c) When the values within the columns of the table all have integer data types.  d) When the name of the table contains two words with no space. | b |
| 35 | When deleting a record from a table which clause would you always have in your statement so only a particular record is deleted and not the whole table? | a) WHERE  b) SELECT  c) ORDER BY  d) DISTINCT | a |
| 36 | What is the purpose of the ORDER BY Clause? (Choose the best option) | a) Group records  b) Selects values within range  c) Filters records  d) Sorts the result-set | d |
| 37 | What is the purpose of the UPDATE Statement? | a) Deletes all records in a table  b) Makes change to the value or values in any particular record  c) Filters records  d) Specifies which records that should be updated | b |
| 38 | Which type of VIEW is used when you are creating a foundational structure for a number of other views? | a) Field View  b) Summary View  c) Base View  d) Row View | c |
| 39 | Which of the following statements accurately describes a View in SQL? | a) A group of SQL statements formed together a logical unit of work.  b) Also known as inner query or nested query.  c) Queries used to provide users with a managed presentation of the data.  d) Created using the CREATE TABLE statement | c |
| 40 | What is sequential progressive path for achieving full database normalization? | a) 1st NF -> 2nd NF -> 3rd NF -> 4th NF -> 5th NF  b) 1st NF -> 2nd NF -> BCNF -> 4th NF -> 5th NF  c) 1st NF -> 2nd NF -> 3rd NF -> BCNF -> 4th NF -> 5th NF  d) 1st NF -> 2nd NF ->BCNF -> 3rd NF -> 4th NF -> 5th NF | c |
| 41 | What is the core purpose of the data normalization process? | a) To create efficient primary structures.  b) To maximize data duplication to support efficient cross-table queries.  c) To remove and minimize the duplication of data within a database.  d) To automatically generate intra-table relationships. | c |
| 42 | Which statement best describes a relationship within a Relational Database? | a) The attribute values on one table are identical to the attribute values in another table.  b) The table structure of one entity is related to the structure of another entity.  c) The attribute datatypes are related to the data type of another table.  d) Data information in one table is directly related to data in another table. | d |
| 43 | What is the purpose of a Database Trigger? | a) To allow end users to see data subsets from one or more database tables.  b) To Automatic activate database-related actions on the occurrence of an event.  c) They allow data to be quickly retrieve from one or more tables.  d) To support batch processing and manage database activity using a stored program. | b |
| 44 | Which key type is deployed to uniquely identify a row? | a) Foreign Key  b) Primary Key  c) Candidate Key  d) Surrogate Key | b |
| 45 | Which Codd rules should be considered while determining if a database id relational? | a) The Information Rule and The Guaranteed Access Rule  b) The XML Rule and The Guaranteed Access Rule  c) The Information Rule and The Hierarchy Rule  d) The Hierarchy Rule and The Guaranteed Access Rule | d |
| 46 | What are the two forms of attack? | a) Attack Vector and Attack Surface  b) Passive and Active Attack  c) DDoS and BYOD  d) Passive and Interactive Attack | a |
| 47 | Which of the following is not true of Demilitarized Zone? | a) Logical Gap between the entity point to a network, outside world and the network itself.  b) It provides a barrier between the outside world and organization’s sensitive information.  c) DMZ can only be accessed from internet but not from intranet which has sensitive data.  d) DMZs can be either physical or logical. |  |
| 48 | An Anti-Virus which has not been updated is an example of which of the following | a) Threat  b) Vulnerability  c) Risk  d) Attack Vector | c |
| 49 | The human side of hacking, targeting individuals to either gain knowledge or confirm ways into an organization’s information and data is called? | a) White box hacking  b) Active hacking  c) Skimming  d) Social Engineering | d |
| 50 | What is the one way algorithm generally used for securing passwords? | a) Symmetric Key Algorithm  b) Asymmetric Key Algorithm  c) Hashing Algorithm  d) Pretty Good Privacy(PGP) | c |
| 51 | Which of the below can help protect data at rest? | a) BitLocker  b) TLS version 1.1  c) SHA256  d) OWASP Enterprise Security API |  |
| 52 | Which of the following is a code insertion in an entry field technique to attack data driven applications and extract sensitive data from database? | a) Spear Phishing  b) Packet Sniffing  c) Cross-Site Scripting  d) SQL Injection | d |
| 53 | Implementing a Username, Password and Security Token to access a system is an example of which of the following? b/d | a) Multi Factor Authorization  b) Multi Factor Authentication  c) Role Based Access Control  d) Identity and Access Management | d |
| 54 | Which of the following helps in a strong authentication implementation? | a) Strong Encryption technology  b) SSL Enabled Webpages  c) Firewalls in place  d) Strong password policy | b |
| 55 | Which of the following is not a Security Misconfiguration mitigation measure? | a) Operating System Hardening  b) Remove unused user accounts  c) Input validation on input fields  d) Disable unnecessary services | c |
| 56 | Which among the following implementation enables most secure way of transferring data? | a) SSL v 3.0  b) TSL v 1.2  c) TSL v 1.1  d) SSL v 5.0 | b |
| 57 | How can you prevent privilege escalation? | a) Secure Coding practice  b) TLS Implementation  c) Hashing Algorithm  d) Crypto Mining | b |
| 58 | A user is able to get the account details of another user in an online banking portal. What kind of vulnerability does this Application have? d | a) Broken Authorization  b) Cross Site Scripting  c) HTTP Parameter pollution  d) Broken Authentication | b |
| 59 | Which of the following can help mitigate XXE? - xml external entity - | a) WAF  b) IDS  c) Firewall  d) IPS - intrusion prevention | d |
| 60 | Heartbleed vulnerability was related to which of the following components? | a) OpenHTTP  b) OpenSSL  c) OpenTLS  d) OpenOS | b |
| 61 | What is **OWASP Dependency Tool** used for? | a) To know the dependent function calls.  b) To know the list of vulnerable components used by the application.  c) To know the list of other applications on which your applications is dependent.  d) To know the list of Dependent Services. | b |
| 62 | Which of the following is a website which provides flawed or vulnerable pages to test or experiment on? | a) OWASP ESAPI  b) OWASP Broken Page  c) OWASP WebGoat  d) OWASP Broken Website | c |
| 63 | What kind of attack allows an attacker to write malicious code in an input field enabling the code to run on Victim’s system? | a) SQL Injection  b) Session manipulated  c) Insecure Direct Object Reference  d) Cross-site Scripting | d |
| 64 | How can you mitigate insecure deserialization? | a) Input Validation  b) Encrypt the byte stream  c) Digitally signing the byte stream  d) All of the above | d |
| 65 | Which of the following activities a SIEM cannot do? | a) Get real time alerts from multiple source systems.  b) Can permit/deny network traffic from one Network to another.  c) Can correlate logs of Webserver, App server and DB Server.  d) Can be configured to reduce false positives. | b |
| 66 | What is the standard port used for remote syslogging in a Linux based system? | a) TCP 80 or 443  b) TCP 514  c) UDP 514  d) UDP 23 | c |
| 67 | You have enabled logging on a WebServer and redirected logs to a centralised server. The End Users started complaining of slow loading of web pages. What do you do? | a) Remove logging  b) Redirect logs to another server  c) Implement decentralised instead of Centralised  d) Enable custom logging to capture only interesting logs thus reducing the log traffic | c |
| 68 | What is not an advantage of Performance Monitor Baseline? | a) Optimize performance of the system.  b) Anything out of ordinary could give an indication of a security compromise.  c) Can correlate the performance of the system with any attack seen on perimeter devices.  d) Can configure metrics like CPU utilization, outbound network traffic, memory utilization. | b |
| 69 | Which of the following is a common flaw with respect to logging? | a) Logs that are left on a single host and there’s no copy of logged events anywhere else.  b) Having a centralised Log Server.  c) Encrypting the logs leading to higher resource consumption.  d) Having decentralised Log Servers. | a |
| 70 | Which of the following is not the core attribute of Cloud Computing? | a) Security  b) Pooled Computing  c) Broad Network Access  d) Elasticity | a |
| 71 | Thin Client system is the recommended method of access client in which service model? | a) PaaS  b) XaaS  c) IaaS  d) SaaS | d |
| 72 | Which are the key cloud enabling technologies? | a) Virtualization  b) Cloud Storage  c) Cloud Database  d) All of the above | d |
| 73 | Which service does not include in Xaas? - Anything | a) DaaS -Desktop  b) STaaS -Storage  c) BTaaS -  d) BPaaS - Business process | c |
| 74 | What are the basic concepts from which cloud computing has evolved? | a) Polymorphism & Virtualization  b) Abstraction and Virtualization  c) Encapsulation and Virtualization  d) Abstraction and Encapsulation | b |
| 75 | Which scaling methods are used in cloud computing? | a) Horizontal & Vertical  b) Scale IN  c) Both a) and b)  d) None | a |
| 76 | Which feature is not an advantage of private cloud over public cloud? | a) Security  b) Access Control  c) Service APIs  d) Data Control | c |
| 77 | Public Cloud can be considered in which scenario? | a) To host applications which have heavy load spikes.  b) For hosting temporary infrastructure for a limited period.  c) For storing/hosting highly sensitive data services  d) Only a) and b) | d |
| 78 | Which of the following is a limiting factor of cloud adoption in terms of technology? | a) Data Confidentiality  b) Resource Availability  c) Expenses  d) All of the above | d |
| 79 | The regulatory control which should be considered for public cloud adoptions is? | a) Guidelines on Multi-Regional data storage  b) Location of Service Providers HQ  c) Both a) and b)  d) None | c |
| 80 | Security controls can be classified broadly as? | a) Corrective  b) Preventive  c) Detective  d) All of the above | d |
| 81 | Which all basic technologies advancement influenced the growth of cloud? | a) Block Chain  b) Virtualization  c) Virtual Data Centres  d) All of the above | D |
| 82 | Open Nebula is a/an? | a) VMM  b) VIM  c) Hypervisor  d) Orchestrator | c |
| 83 | A Hypervisor is considered as bare metal? | a) When added as a role on a hardware with an Operating System.  b) When the hypervisor supports multiple Operating Systems on its VMs.  c) When installed as a base operating system of the function.  d) When installed on a virtual machine created on type 2 hypervisor. | c |
| 84 | Which of the following is not a benefit of having a Data Centre? | a) Centralized resource management  b) Faster Deployments  c) Redundancy  d) Economical | a |
| 85 | NFV technology will not virtualize?  Network Functions Virtuallisation will virtualise routing & storage but not switch. | a) Storage  b) Switch  c) Firewall  d) Router | b |
| 86 | Live Migration is? | a) Migration of VM from one host to another without downtime  b) Migration of host from one cluster to another without downtime  c) Migration of data from one storage to another without downtime  d) Migration of host from private cloud to public cloud | a |
| 87 | Which of the following factors make organizations to move away from cloud? | a) Ambiguity in access control  b) Risk of data loss & privacy  c) Regulatory Rules  d) All of the above | d |
| 88 | Keyword used to define abstract class | a) abst  b) abstract  c) Abstract  d) abstract class | b |
| 89 | Combining of associated variables and methods in the same object is known as? | a) Encapsulation  b) Abstraction  c) Polymorphism  d) Inheritance | a |
| 90 | Which of the following is/are UML Tools? | a) Visio  b) UMLet  c) Both  d) None | c |
| 91 | Which of the following is not an Object Oriented Language? | a) Java  b) C++  c) C#  d) C | d |
| 92 | Switches work on | a) Data Link Layer  b) Transport Layer  c) Presentation Layer  d) Session Layer | a |
| 93 | Which of the following is/are function(s) of Modem? | a) Modulates signal to decode the information  b) Demodulates Signal to decode the information  c) Both a) and b)  d) None | c |
| 94 | NAS is | a) Network Address System  b) Network Access System  c) Network Attached Storage  d) Network Access Storage | c |
| 95 | Benefits of DevOps are? | a) Better Customer Satisfaction  b) Delivers value faster  c) Improved application reliability  d) All of the above | d |
| 96 | DevOps is? |  |  |
| 97 | Firewall is? |  |  |
| 98 | Spear Phishing? |  |  |
| 99 | White Hat Hackers? |  |  |
| 100 | CRUD? |  |  |
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| **Motivation behind attacking a web server** | |
| Inject Malicious Content | An attacker inserts malicious code to gather intel |
| Financial or Monetary Gain | Ann attacker injects a payload that provides banking accounts and lines of credit. |
| Steal Valuable Information | An attacker exploits a user’s identity for their benefit of gaining access to internal LAN |
| Hacktivism | An attacker performs a DoS to a Government organization |
| **Types of Vulnerabilities to the example provided** | |
| Misconfiguration Vulnerability | A Windows machine using an insecure configuration option |
| Authentication Vulnerability | A user logging into a system with default credentials |
| Operating System Vulnerability | A Linux host with Red Hat Operating System Out of Date |
| Applications Vulnerability | A Windows host with an outdated versions of Microsoft Word |