DS & CC Lab Viva Question and Answers

1) Define Distributed System?

- A distributed system is a collection of independent computers that appear to the users of the system as a single computer.
- A distributed system is one in which components located at networked communicate and coordinate their actions only by-passing message

2) List the Characteristics of Distributed System?

1. Programs are executed concurrently
2. There is no global time
3. Components can fail independently (isolation, crash)

3) What are distributed computing model.

1. Workstations Model
2. Mini Computer Model
3. Workstation Server Model
4. Processor-pool Model
5. Hybrid Model

4) What are architecture of distributed computing system.

Computer architectures consisting of interconnected, multiple processors are basically of two types:

1. **Shared memory architecture also known as tightly coupled systems:**
   - In these systems, there is a single system wide primary memory (address space) that is shared by all the processors.
2. **Distributed memory architecture also known as loosely coupled systems:**
   - In these systems, the processors do not share memory, and each processor has its own local memory.
   - In these systems, all physical communication between the processors is done by passing messages across the network that interconnects the processors.

5) Mention the Examples of Distributed System?

1. The Internet
2. Intranets
3. Mobile and ubiquitous computing

6) Mention the Challenges in Distributed System?

1. Heterogeneity
2. Openness
3. Security
4. Scalability
5. Failure handling
6. Concurrency
7. Transparency

7) What Are The Advantages Of Distributed Systems?

1. Performance
2. Distribution

3. Reliability (fault tolerance)
4. Sharing of data/resources
5. Communication

8) What Are the Disadvantages Of Distributed Systems?

1. Difficulties of developing distributed software
2. Networking problems
3. Security problems

9) What are the Security Mechanisms Used in Distributed Computing?

1. **Encryption:**
   E.g. Blowfish, RSA
2. **Authentication:**
   E.g. password, public key authentication
3. **Authorization:**
   E.g. access control lists

10) Define Protocol?

- The term protocol is used to refer to a well-known set of rules and formats to be used for communication between processes in order to perform a given task.

The definition of a protocol has two important parts to it:

a. A specification of the sequence of messages that must be exchanged;
b. A specification of the format of the data in the messages.

11) What is Meant by Internet Protocol?

- The IP protocol transmits datagram from one host to another, if necessary via intermediate routers.
- There are several header fields that are used by the transmission and routing algorithms.

12) What is RPC?

- RPC stands for Remote Procedural Call.
- RPC is an extension of a local procedural call, which allows client programs to call server programs running on separate processes on remote machines.
- Remote Procedure Call (RPC) provides a different paradigm for accessing network services.
- Instead of accessing remote services by sending and receiving messages, a client invokes services by making a local procedure call.

13) What are elements of RPC mechanisms?

There are five elements in RPC mechanisms:

1. The client
2. The client stub
3. The RPCRuntime
4. The server stub
5. The server

14) What is RMI?

- RMI is stand for Remote Method Invocation.
- It is an API that provides a machine to create distributed application in java.
- The RMI provides remote communication between the application using two objects stub and skeleton.

15) What Is The Difference Between Rmi And Rpc?

- Remote Procedure Call or the RPC and the Remote Method Invocation or RMI are both message passing techniques in the Inter Process Communication (IPC).

But there are two basic differences between the two methods:

1. RPC supports procedural programming. I.e. only remote procedures can be invoked. Whereas RMI is object-based. As the name suggests, it is invoked on remote objects.
2. In RPC, the parameters that are passed are ordinary data structures. Whereas in RMI, objects can be passed as parameters.

16) What Is Meant By Client Server Communication?

- The client–server model of computing is a distributed application structure that partitions tasks or workloads between the providers of a resource or service, called servers, and service requesters, called clients.

17) What Is Meant By Group Communication?

- Group communication is a multicast operation is more appropriate- this is an operation that sends a single message from one process to each of the members of a group of process, usually in such a way that the membership of the group is transparent to the sender.

18) Difference Between Synchronous And Asynchronous Communication?

Synchronous Communication:

- In synchronous form of communication, the sending and receiving processes synchronize at every message. In this case, both send and receive are blocking operations. Whenever a send is issued the sending process is blocked until the corresponding receive is issued. Whenever receive is issued, the process blocks until a message arrives.

Asynchronous Communication:

- In asynchronous form of communication, the use of the send operation is non-blocking in that the sending process is allowed to proceed as soon as the message has been copied to a local buffer and the transmission of the message proceeds in parallel with the sending process. The receive operation can have blocking and non-blocking variants.

19) What is thread?

- Threads are a popular way to improve application performance through parallelism. In traditional operating systems the basic unit of CPU utilization is a process.
- Each process has its own program counter, its own register states, its own stack, and its own address space.

20) Write A Note On Ring Algorithm?

- It is based on the use of a ring as the name suggests. But this does not use a toke.
- Processes are physically ordered in such a way that every process knows its successor.
- When any process notices that the coordinator is no longer functioning, it builds up an ELECTION message containing its own number and passes it along the to its successor.
- If the successor is down, then sender skips that member along the ring to the next working process

21) What is SOA?

- SOA stand for Service Oriented Architecture.
- “A service-oriented architecture is essentially a collection of services. These services communicate with each other. The communication can involve either simple data passing or it

could involve two or more services coordinating some activity. Some means of connecting services to each other is needed."

- SOA delivers functionalities as services emphasizing loose coupling between interacting services

22) What is Parallel computing?

- Parallel computing is the simultaneous use of multiple compute resources to solve a computational problem.
- A problem is broken into discrete parts that can be solved concurrently.
- Each part is further broken down to a series of instructions.
- Instructions from each part execute simultaneously on different CPUs

23) What Is Data-parallel Computation?

- Data is partitioned across parallel execution threads, each of which perform some computation on its partition – usually independent of other threads.

24) What Is Task-parallel Computation?

- The parallelism manifests across functions.
- A set of functions need to compute, which may or may not have order constraints among them.

25) What is Cloud Computing?

- Cloud Computing is nothing but the delivery of computing services such as a database, networking, software, storage, servers, and many more.
- Cloud computing is the dynamic delivery of IT resources and capabilities as a Service over the Internet.
- Cloud Computing is a modern computing paradigm that providing IT infrastructure and essential services i.e. infrastructure as a service (IaaS), platform as a service (PaaS), software as a service (SaaS) etc.

26) What is Grid Computing?

- Grid computing consists of a large number of computers which are connected parallel and forms a computer cluster.
- This combination of connected computers uses to solve a complex problem.
- In grid computing, this service of the computer is connected and run independent tasks.
- Grid computing uses a wide range of applications, for instance, mathematical, scientific, and educational tasks through several computing resources.

27) What is Cluster Computing?

- A cluster is a type of parallel and distributed system, which consists of a collection of interconnected standalone computers working together as a single integrated computing resource.
- A computer node can be a single or multi-processor system such as PCs, workstations, servers, SMPs with memory, I/O and an OS. The nodes are interconnected via a LAN.
- **Clustering hardware comes in three basic flavours:**
    1. Shared Disk Clusters
    2. Shared Nothing Clusters
    3. Mirrored Disk Clusters

28) What are cloud models?

Following are the working models for cloud computing:

1. **Deployment Models:**

- This refers to the location and management of the cloud's infrastructure.
- A deployment model defines the purpose of the cloud and the nature of how the cloud is located.
- Deployment models define the type of access to the cloud, i.e., how the cloud is located?
- **Cloud can have any of the four types of access:**
    a. **Public:** The cloud infrastructure is made available to the general public or a large industry group and it is owned by an organization selling cloud services.
    b. **Private:** The cloud is operated solely for an organization. It may be managed by the organization or a third party and may exist on premise or off premise.
    c. **Hybrid:** The cloud infrastructure is a composition of two or more clouds (private, community, or public).
    d. **Community:** The cloud infrastructure is shared by several organizations and supports a specific community that has shared concerns. It may be managed by the organizations or a third party and may exist on premise or off premise
    e.

2. **Service Models**

- This consists of the particular types of services that you can access on a cloud computing platform
- **Service Models are categorized into three basic service models which are:**

    I. Infrastructure-as–a-Service (IaaS)- IaaS gives you the infrastructure to develop, run, and manage your applications in cloud environments
    II. Platform-as-a-Service (PaaS)- PaaS lets you develop apps
    III. Software-as-a-Service (SaaS)- SaaS lets you use cloud apps

29) Explain Software-as-a-Service(SaaS).Give Example.

Software as a Service (SaaS) is the simplest form of cloud computing.

There is no third-party development or resource for the user, rather SaaS applications offer powerful tools right from your web browser that, in most cases, give users the ability to collaborate with others cheaply and from any location.

A good example of SaaS is Google Docs.

30) Explain Platform-as-a-Service (SaaS). Give Example.

- The capability provided to the consumer is to deploy onto the cloud infrastructure *consumer-created*

or *acquired applications* created using *programming languages and tools* supported by the provider.

- The consumer does not manage or control the underlying cloud infrastructure.
- Consumer has control over the deployed applications and possibly application hosting environment configurations.
- **Google App Engine is among the many PaaS examples that are a part of a whole suite of services.**

31) Explain Infrastructure-as-a-Service (SaaS). Give Example.

- The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources.
- The consumer is able to deploy and run arbitrary software, which can include operating systems and applications.
- The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, deployed applications, and possibly limited control of select networking components (e.g., host firewalls).
- Infrastructure as a service (IaaS) is a cloud computing offering in which a vendor provides users access to computing resources such as storage, networking, and servers. Organizations use their own platforms and applications within a service provider's infrastructure.
- **Google Compute Engine (GCE) is the Infrastructure as a Service (IaaS) component of Google Cloud Platform which is built on the global infrastructure that runs Google's search engine, Gmail, YouTube and other services.**
- **Google Compute Engine enables users to launch virtual machines (VMs) on demand. VMs can be launched from the standard images or custom images created by users.**

32) Write different features of google docs.

Docs is accessible from any device, using any modern web browser. In fact, while Microsoft users can install Word and other 365 apps on only five devices,3 Google allows users to access Docs and the rest of Google Workspace on an unlimited number of devices.

33) What are new google doc file types used by google drive.

Ans: Google doc, Google sheets, Google slides, Image files, Video files.

34) Difference between Microsoft Word and Google Doc.

The difference between Microsoft Word and Google Doc is that once a Word document is saved, you have to open it up in the application itself to make edits. In Google Docs, you never have to save. In terms of offline access, you don't have to be connected to the internet to create or edit a Word document.

35) What are the three options for sharing a Google Doc with someone else?

- To let more than 100 people view or edit your file at the same time, publish it as a web page instead.
- Share a file or folder with specific people:
- Share a link to a file or folder:
- Stop sharing a file or folder you own:
- Remove a link to a file or folder you own:

36) What is commenter in google drive?

Commenter: People can make comments and suggestions, but can't change or share the file with others.
Editor: People can make changes, accept or reject suggestions, and share the file with others.

37) What does it mean when a Google Doc is restricted?

Restricted, which means only the people with the email addresses you add can access the folder or file.

Anyone in your group can edit or view, giving access to anyone with your company's domain (i.e., xxx@yourcompany.com).

38) What is the default mode in google doc when sharing document?

If you're the owner of the document, it will always open in edit mode. That's the default for Docs and there isn't any way to change it at this time. That said, here are a couple of workarounds for you to try: If you have another account, you could share the document with that account using "View" permission

39) What is Virtualization?

- Virtualization is the "creation of a virtual (rather than actual) version of something, such as a server, a desktop, a storage device, an operating system or network resources".
- In other words, Virtualization is a technique, which allows to share a single physical instance of a resource or an application among multiple customers and organizations.
- It does by assigning a logical name to a physical storage and providing a pointer to that physical resource when demanded.

40) What is IAM?

- According to Gartner, Identity and Access Management (IAM) is the security discipline that enables the right individuals to access the right resources at the right times for the right reasons.
- IAM addresses the mission-critical need to ensure appropriate access to resources across increasingly heterogeneous technology environments.
- Enterprises traditionally used on-premises IAM software to manage identity and access policies, but nowadays, as companies add more cloud services to their environments, the process of managing identities is getting more complex.

41) Differentiate between stateful & stateless servers

Stateful Server:

- The stateful approach does depend on the history of the serviced requests.
- A stateful server keeps state between connections.

Stateless Server:

- The stateless approach does not depend on history.
- A stateless server does not keep state between connections

42) What is Sockets?

- Sockets are used in both UDP and TCP types of message communication.
- Sockets abstraction provides an end-point communication.
- A message is transmitted from a socket in one process to a socket in another process.

43) What is UDP?

- The User Datagram Protocol (UDP) is simplest Transport Layer communication protocol available of the TCP/IP protocol suite.
- It involves minimum amount of communication mechanism. UDP is said to be an unreliable transport protocol but it uses IP services which provides best effort delivery mechanism.
- In UDP, the receiver does not generate an acknowledgement of packet received and in turn, the sender does not wait for any acknowledgement of packet sent. This shortcoming makes this protocol unreliable as well as easier on processing.

44) What is TCP?

- TCP is a connection-oriented protocol and offers end-to-end packet delivery. It acts as back bone for connection.
- TCP ensures reliability by sequencing bytes with a forwarding acknowledgement number that indicates to the destination the next byte the source expect to receive.

45) What is Datagram?

- **Datagram socket** is a type of network **socket** which provides connection-less point for sending and receiving packets.
- Every packet sent from a **datagram socket** is individually routed and delivered. It can also be used for sending and receiving broadcast messages

46) What is difference between TCP & UDP?

No.	TCP	UDP
1.	TCP is a connection-oriented protocol. Connection-orientation means that the communicating devices should establish a connection before transmitting data and should close the connection after transmitting the data.	UDP is the Datagram oriented protocol. This is because there is no overhead for opening a connection, maintaining a connection, and terminating a connection. UDP is efficient for broadcast and multicast type of network transmission.
2.	TCP is reliable as it guarantees delivery of data to the destination router.	The delivery of data to the destination cannot be guaranteed in UDP.
3.	TCP is comparatively slower than UDP.	UDP is faster, simpler and more efficient than TCP.
4.	TCP doesn't support Broadcasting.	UDP supports Broadcasting.

47) What is mutual exclusion?

- **Mutual exclusion** implies that only one process can be inside the critical section at any time. If any other processes require the critical section, they must wait until it is free.
- Progress means that if a process is not using the critical section, then it should not stop any other process from accessing it.
- **Requirements of Mutual exclusion Algorithm:**
  1. No Deadlock
  2. No Starvation
  3. Fairness
  4. Fault Tolerance

48) What is Token based algorithm?

- It's is solution to mutual exclution.
- In token based algorithm a unique **token** is shared among all the sites.
- This approach uses sequence number to order requests for the critical section.
- Each requests for critical section contains a sequence number. This sequence number is used to distinguish old and current requests.

49) Write Full of IAM

Identity and access management (IAM)

50) Explain the Features of IAM:

Shared access to your AWS account You can grant other people permission to administer and use resources in your AWS account without having to share your password or access key.

Granular permissions You can grant different permissions to different people for different resources. For example, you might allow some users complete access to Amazon Elastic Compute Cloud (Amazon EC2), Amazon Simple Storage Service (Amazon S3) and other AWS services. For other users, you can allow read-only access to just some S3 buckets, or permission to administer just some EC2 instances, or to access your billing information but nothing else.

Secure access to AWS resources for applications that run on Amazon EC2You can use IAM features to securely provide credentials for applications that run on EC2 instances. These credentials provide permissions for your application to access other AWS resources. Examples include S3 buckets and

DynamoDB tables.

Multi-factor authentication (MFA)You can add two-factor authentication to your account and to individual users for extra security. With MFA you or your users must provide not only a password or access key to work with your account, but also a code from a specially configured device

51) What do you mean by policy in AWS

A policy is an object in AWS that, when associated with an identity or resource, defines their permissions

52) What do you mean by Access Management in AWS?

Access management is often referred to as authorization. You manage access in AWS by creating policies and attaching them to IAM identities (users, groups of users, or roles) or AWS resources.

53) Write the steps to add permissions to a user by directly attaching managed policies

1. Sign in to the AWS Management Console and open the IAM console at https:// console.aws.amazon.com/iam/.

2. Choose Users in the navigation pane, choose the name of the user whose permissions you want to modify, and then choose the Permissions tab.

3. Choose Add permissions, and then choose Attach existing policies directly to user.

4. Select one or more check boxes for the managed policies that you want to attach to the user. You can also create a new managed policy by choosing Create policy. If you do, return to this browser tab or window when the new policy is done. Choose Refresh; and then select the check box for the new policy to attach it to your user.

5. Choose Next: Review to see the list of policies that are to be attached to the user. Then choose Add permissions.

54) What are root user and IAM user in AWS?

There are two different types of users in AWS. You are either the account owner (root user) or you are an AWS Identity and Access Management (IAM) user. The root user is created when the AWS account is created and IAM users are created by the root user or an IAM administrator for the account.

55) What is AWS IAM user?

An AWS Identity and Access Management (IAM) user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS. A user in AWS consists of a name and credentials. An IAM user with administrator permissions is not the same thing as the AWS account root user.

56) What is the root user in AWS?

When you first create an Amazon Web Services (AWS) account, you begin with one identity that has complete access to all AWS services and resources in the account. This identity is called the AWS account root user. You can sign in as the root user using the email address and password that you used to create the account.

57) How do I protect my AWS root account?

Limit root user access to your resources

Use IAM users for day-to-day access to your account, even if you're the only person accessing it.

Eliminate the use of root access keys. Instead, rotate them to IAM access keys, and then delete the root access keys.

Use an MFA device for the root user of your account.

58) What is the difference between IAM roles and policies?

IAM roles define the set of permissions for making AWS service request whereas IAM policies define the permissions that you will require.

IAM roles are like users and policies are like permissions.

59) What is an EC2 in AWS?

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It provides you with complete control of your computing resources and lets you run on Amazon's proven computing environment.

60) What are the Features of AWS Root User

Root user is ideally the first AWS user that gets created by default when you create your AWS account.

You can login as a root user using the email address and password that you used to create your AWS account.

All the AWS account have a root user(mind it one and only one)

A root user has full access to all the resources in an AWS account

You cannot use an IAM policy to restrict access of a root user.

The only way to restrict permission to root user is by having Service Control Policy attached to your account

You should not use your root user for your everyday task (even administrative ones). Ideally you should create your first Administrator IAM user and lock your root account right away

61) What are the Features of AWS IAM User?

IAM user can be created by a root user or an IAM user who has permission to create one.

You can login as a IAM user using your username/password and your AWS AccountId/Alias

An IAM doesn't have full access until unless explicitly assigned. So, user can only perform task for which permission has been assigned to it. For example if an IAM user has S3 full access, it can do everything with S3 but cannot create an EC2 instance.

You can use an IAM policy to restrict access of an IAM user.

An IAM user can represent a person or an application that uses its credentials to make request to various AWS services

By default, an IAM user has no permission

You can assign permission to each IAM user individually or as a group depending on the need. Hence, you can limit the permission to only what's needed for the job for that user(principal of least privilege)

62) What's AWS IAM?

The IAM's full form is Identity and access management.

Are root users and IAM users the same?

No, the root user is also called the master user. The IAM user is subset of the root user.

In the IAM service, can we monitor the IAM user activity?

Yes, you can monitor the actives of IAM users. If any violation, you can remove access for the IAM user

63) How authentication is controlled in the IAM service?

You can manage the users. You can control access keys, passwords, multifactor authentication.

Manages federated users

64) What is federated user access management?

A user who is allowed to access AWS resources from third-party vendors – such as Google, Facebook, Linked In, Corporate credentials, etc.

What is Authorization in terms of AWS IAM service?

It's to provide authorization for certain AWS resources – not all. The best example is providing read-only access to the 'S3' service.

65) How to control Authorization in AWS IAM?

You can control authorization by creating policies.

What's the other name of the IAM user?

You can also be called an IAM entity.

66) What is CloudTrail in AWS?

It's a service, which records the logs of each IAM entity. So that you can use these logs for auditing and compliance purposes. In these logs you will get answers for Who, When, Where, What, Which

Who made the request?

When was the request made?

What was the request about?

Which resources were acted upon in response to the request?

Where was the request made from and made to?

67) What are the 5 top security credentials in AWS IAM?

User-id and Password

E-mail address and Password

Access Keyes

Key pair

Multi-factor authentication

68) What are Temporary Security Credentials?

These are short-lived security credentials. These you can create from AWSSTS service (AWS security Token Service).

What are AWS IAM roles?

User – Specific IAM entity

Group – These people will have the same kind of Access

69) What are the top AWS IAM Roles?

In AWS IAM there are two types of roles. The IAM user will have a permanent identity. The federated user will not have an identity.

70) What is the IAM Hierarchy of Privileges?

Root user

IAM user

user with temporary credentials

71) What is cloud computing?

Cloud computing refers to the usage of computing resources (servers) on t**he internet (refers to the term** cloud) for the purpose of storing, managing, analyzing, and processing the data. Here, instead of maintaining our own servers, we use the infrastructure provided and maintained by third-party vendors such as Microsoft, AWS, etc, and pay them based on the server usage time duration.

Cloud computing enhances the speed of execution, ensures flexibility of resources, and easier scalability.

Cloud computing can be used to attain high fault tolerance and high system availability and this can also be done dynamically as per the infrastructural requirements of the application.

72)What is Google Cloud Platform?

Google Cloud Platform is a cloud platform developed by Google, that helps people to access the cloud systems and computing services. GCP offers a large number of services under the compute, database, storage, migration and networking domains of cloud computing.

73)What are the various components of the Google Cloud Platform?

Google Compute Engine, Google Cloud Container Engine, Google Cloud App Engine, Google Cloud Storage, Google Cloud Dataflow, Google BigQuery Service, Google Cloud Job Discovery, Google Cloud Endpoints, Google Cloud Test Lab, Google Cloud Machine Learning Engine.

74)What are the advantages of using Google Cloud Platform?

GCP offers much better pricing deals as compared to the other cloud service providers
Google Cloud servers allow you to work from anywhere to have access to your information and data.
Considering hosting cloud services, GCP has an overall increased performance and service
Google Cloud is very fast in providing updates about server and security in a better and more efficient manner
The security level of Google Cloud Platform is exemplary; the cloud platform and networks are secured and encrypted with various security measures.

75)What is Google Cloud SDK?

Google Cloud SDK (Software Development Kit), in simple terms, is a set of tools that are used to manage applications and resources that are hosted on the Google Cloud Platform. It is composed of the gsutil, gcloud, and bqcommand line tools. The gcloudtool is automatically downloaded with the Cloud SDK.

76)What are the Google Cloud APIs? How can you access them?

Allow users to add the power of everything to your Google Cloud-based application, and that's in the easiest manner. APIs can add power to everything from storage access to the image analysis that is based on machine learning.
Accessing Google Cloud APIs:One can easily access Cloud APIs with the client libraries from the server applications. You can use a number of programming languages to access Google Cloud APIs, by using mobile applications via Firebase SDKs or through the third-party clients. Google Cloud APIs can also be accessed through Google Cloud Platform Console Web UI or Google SDK command line tools.

77)What is the Google app engine?

Google App Engine (often referred to as GAE or simply App Engine) is a cloud computing platform as a service for developing and hosting web applications in Google-managed data centers. Applications are sandboxed and run across multiple servers. App Engine offers automatic scaling for web applications—as the number of requests increases for an application, App Engine automatically allocates more resources for the web application to handle the additional demand.Google App Engine primarily supports Go, PHP, Java, Python, Node.js, .NET, and Ruby applications, although it can also support other languages .

78)What services are provided by Google App Engine?

Platform as a Service (PaaS) to build and deploy scalable applications
Hosting facility in fully-managed data centers
A fully-managed, flexible environment platform for managing application server and infrastructure
Support in the form of popular development languages and developer tools

79)Features of Google App Engine.

Collection of Development Languages and Tools

The App Engine supports numerous programming languages for developers and offers the flexibility to import libraries and frameworks through docker containers.
Some of the languages offered include — Python, PHP, .NET, Java, Ruby, C#, Go, Node.Js.

Fully Managed

Google allows you to add your web application code to the platform while managing the infrastructure for you. The engine ensures that your web apps are secure and running and saves them from malware and threats by enabling the firewall.

Pay-as-you-Go

The app engine works on a pay-as-you-go model, i.e., you only pay for what you use. The app engine automatically scales up resources when the application traffic picks up and vice-versa.

Effective Diagnostic Services

Cloud Monitoring and Cloud Logging that helps run app scans to i**dentify bugs. The app reporting** document helps developers fix bugs on an immediate basis.

Traffic Splitting

The app engine automatically routes the incoming traffic to different versions of the apps as a part of A/B testing.

80)Benefits of Google App Engine.

All Time Availability
Ensure Faster Time to Market
Easy to Use Platform
Diverse Set of APIs
Increased Scalability
Improved Savings
Smart Pricing