AWS COURSE CONTENT

1. **INTRODUCTION TO CLOUD COMPUTING**
   - History of cloud
   - Different vendors of Cloud computing
   - Importance of cloud computing
   - Advantages and Disadvantages of cloud computing

2. **CLOUD DEPLOYMENT METHODS**
   - Private cloud
   - Public cloud
   - Hybrid cloud

3. **CLOUD SERVICES / DELIVERY MEDELS**
   - Software as a Service (SaaS)
   - Platform as a Service (PaaS)
   - Infrastructure as a Service (IaaS)

4. **INTRODUCTION TO AWS**
   - AWS Architecture
   - AWS Demographics – Availability zones, regions, Edge locations
   - AWS Management console
   - AWS Account setup
   - AWS free subscription

5. **VIRTUALIZATION**
   - Life without Virtualization
   - Enter the VMWARE
   - The Virtual Machine
   - Key Properties of virtual machine
   - Hypervisor
   - Your Choice of hypervisor
   - Some terminologies
   - Installing Virtualbox on Windows
   - Installing OS on the newly created VM.

6. **AMAZON ELASTIC COMPUTE CLOUD (EC2)**
   - Different types of instances
   - Pricing model in EC2 instances
   - Regions and Availability Zones
   - Amazon Machine Images (AMI)
   - EC2 Windows instance and Linux Instance
   - Securirty Groups
   - Key Pairs
   - Volumes
   - Elastic Ips

- Launching an instance
- Logging into the instance

7. UNIX BASICS
- Process management
- User Management
- Vi editor
- Date archival commands – tar, zip...
- File/Directory management commands
- Cron job commands
- Admin commands
- Yum, rpm, apt-get
- Basic commands

8. RDS
- Creating your Database
- Setting up automatic backups
- Authorizing access to the DB via DB Security Groups
- Parameter Groups
- Snapshots
- Database migration from on-premise to cloud
- Snapshot actions
- DR with multi availability zones.

9. ELASTIC LOAD BALANCER
- Load balancer basics
- Classic and application load balancer
- Health check setup for load balancer
- Attaching instances to load balancers

10. AUTO SCALING
- Launch groups
- Scaling groups
- Scaling policies
- Autoscaling example
- Attaching autoscaling to load balancer

11. ELASTIC BLOCK STORAGE
- Creating and deleting volumes
- Attaching and detaching volumes
- Creating Snapshots and Increasing root volume with snapshot
- Increasing volume sizes
- VM basics

12. STORAGE(S3)
- Creating and deleting buckets/objects
- Properties

- Permissions
- Storage policy
- Static website hosting
- Versioning
- Life cycle
- Glacier

13. IDENTITY AND ACCESS MANAGEMENT (IAM)
- Users
- Groups
- Roles
- Policies
- Multi Factor Authentication
- Credentials reports
- Customized policy creation

14. VIRTUAL PRIVATE CLOUD(VPC)
- Creating VPC
- Subnets
- Route tables
- ACL's
- Internet Gateway
- Nat Gateway
- Launching instance in Public and private subnets
- VPC peering
- Open VPN setup

15. ROUTE 53
- Hosted Zones
- Record sets
- Domain Registrations
- Configuring hostzones with external domains like freenok

16. CLOUD WATCH
- Monitoring with Cloud watch
- Getting statistics for a specific EC2 instance
- Getting aggregated statistics
- Metrics for other AWS Services and related namespaces
- Setting up notifications

17. ELASTIC BEAN STALK
- Creating Stack
- Creating applications
- Pay around the stacks
- Versioning
- Logs and configuration

18. AWS CLI

- Launching AWS configuration
- Sample examples with AWS instance roles
- Profile vs role