AWS Certified Developer Associate

S. No.	Lesson Name	Lesson Objectives	Lesson Duration (Not to Exceed Minutes)	Topic No.	Topic Name (Slidewise breakup)	Day of Training	Demos (as part of the PPT)
1	AWS Overview	The lesson will provide users with a overview of cloud computing, characteristics of cloud computing, benefits of computing, Overview of AWS, history and background of AWS along with an overview of all AWS Services and products that are offered. Also inclouds AWS Security and standards and AWS Global Infrastructure.		1.01	Overview of Cloud computing		
				1.02	QUIZ: Test your cloud computing skills		
				1.03	Identify the main events in the history of AWS		
				1.04	Quiz: Test your skills of history of AWS		
				1.05	Various AWS platform		
				1.06	QUIZ: Test your AWS platform Skills		
				1.07	Understand AWS Global Infrastructure and Security		
				1.08	Different AWS Services		
				1.09	Practice Assignment for AWS Fundamental Overview.		
				1.1	QUIZ: Test your AWS Services and AWS Fundamental Overview skills		
				1.11	AWS Overview Key Takeaways		
				1.12	LAB		
			120				
2	Identity Access Management- IAM	The lesson will provide users with information about how to control and secure user access to your AWS resources using the AWS Access and Identity Management service. IAM access keys and temporary security credentials. IAM policy evaluation and access using Identity federation		2.01	Overview of Identity and Access Management (IAM)	Day 1	
				2.02	IAM Features		
				2.03	Quiz: check your knowledge of IAM and Features.		
				2.04	Elements of IAM: Identities, Polices and Resources		
				2.05	Identify key IAM terms and Policy Document		
				2.06	Analyze a Sample JSON Script		
				2.07	Quiz: check your knowledge of IAM Policy and resources		
				2.08	List of IAM Best Practices and Important Facts		
				2.09	Quiz: check your knowledge of IAM Permission		
				2.10	List of IAM access keys and temporary security credentials		
				2.11	AWS Policy Evoluation Process		
				2.12	Quiz: check your knowledge of IAM security credentials		
				2.13	Identity federation using three use cases- SAML based federation		
				2.14	IAM as single sign on (SSO)		
				2.15	Quiz: check your knowledge of IAM System access		
				2.16	IAM Key Takeaways		Demo 1-Create an IAM Users, Groups, Roles and Policies
				2.17	Quiz: To check your knowledge of IAM		Demo 2-Create a Role to Delegate Permissions
				2.18	Practice Assignment for AWS IAM		
				2.19	LAB		
			140				
3	Elastic Cloud Compute- EC2	The lesson will help users understand what the EC2 service is and its many uses. Users will learn the EC2 benefits and related terminology. User will understand the Amazon Machine Images the various EC2 instance types, families and purchase options work with Instance Lifecycle and instance store and EBS. User will use it for IAM Roles with ECS and security group. User will get clear understanding of what is Meta Data and User Data in EC2. About Placement Groups and Elastic Load Balancer and Auto Scaling in EC2.		3.01	Overview of Elastic Cloud Computing		
				3.02	Identify EC2 benefits and related terminology		
				3.03	EC2 Instance Types and resource Usage		
				3.04	EC3 Instance types, families and purchasing options		
				3.05	Difference between Root Volume in Instance Store and EBS		
				3.06	Quiz: test your knowledge of EC2 and EBS		
				3.07	Overview of Amazon Machine Images		
				3.08	Identify the flow of an Instance Lifecycle		
				3.09	Instance Store/EBS as Root Volume Type		
				3.10	Definition of Amazon EFS		
				3.11	Quiz: test your knowledge of EBS and AMI		Demo 1-Launch Linux and Windows EC2 instance
				3.12	Create IAM Roles with ECS		Demo 2-Connect EC2 instance, Install and Test Webserver
				3.13	Various Security groups		Demo 3-Setup LoadBalancer and AutoScaling
				3.14	Meta Data and User Data in EC2		
				3.15	Overview of Placement groups		
				3.16	Elastic Load Balancer and Auto Scaling in EC2		
				3.17	Quiz: test your knowledge of ELB, Meta data		
				3.18	Practice Assignment for EC2		
				3.19	QUIZ: Test your knowledge of EC2 instance types		
				3.20	EC2 Key Takeaways		
			190	3.21	Lab		
4	Amazon Simple Storage Service (S3)	The lesson will help users understand the many uses, types and concepts of Amazon S3 storage and how it can be integrated with Cloud Front and Import/Export services. User will also learn about different storage classes in S3 and use of features like Version Control and Lifecycle Management while creating Buckets, ACLs and User Policies. User will also learn to host a static website on S3 and define Cross Origin Resource Sharing. User will lean the process of Transfer Acceleration and Performance Optimization		4.01	Basic Concept and Overview of Simple Storage Service (S3)	Day 2	
				4.02	S3 Buckets and Identify different storage classes in S3		
				4.03	S3 Data Consistency Model		
				4.04	Quiz: test your knowledge on S3 bucket and storage		
				4.05	Overview of Version Control and Lifecycle Management		
				4.06	Definition and creating Buckets, ACLs and User Policies		
				4.07	Quiz: test your knowledge on S3 Policies		
				4.08	Host an static website on S3		
				4.09	Work with Cross Origin Resource Sharing		
				4.1	Describe Cloud Front integrates with S3		
				4.11	S3 Transfer Acceleration and Performance Optimization		
				4.12	Quiz: test your knowledge on website on S3		Demo 1-Create and access an Amazon S3 Bucket
				4.13	Practice Assignment for S3		Demo 2-Amazon S3 Version Control and Lifecycle Management
				4.14	Quiz: Test your S3 knowledge		Demo 3-Amazon S3 Static Website Hosting and CloudFront
				4.15	S3 Key Takeaways		
			105	4.16	Lab		
5	DB Services	The lesson will help users understand all the different types of database that are available in IT environment and will demonstrate the services that AWS provides to simplify database administration, management and migration. User will learn about Relational Database Service. Features, backups, and replicas and Management of DB Instance. On Security groups and differences between Aurora and other DB engines. User will also learn on Amazon ElastiCache and Redshift		5.01	Basic concept of Relational Database Service		
				5.02	Overview and Characteristics of RDS		
				5.03	Online Transaction Processing		
				5.04	Features and availability of DB Instance		
				5.05	RDS Database Failover process		
				5.06	Quiz: check the knowledge of RDS features		
				5.07	Overview of ReadReplicas and DB Instance backups		
				5.08	Management of DB Instance		
				5.09	RDS storage and maintenance	Day 3	
				5.1	Security Groups and its working with DB		
				5.11	Difference between Aurora and other DB engines		
				5.12	Overview of Amazon Elastic ache and Redshift		
				5.13	Practice Assignment: Database Services		
				5.14	QUIZ: Test your knowledge of AWS database services		
				5.15	AWS database services Key Takeaways		Demo 1-Amazon RDS Instance Launch and Configuration
			180	5.16	Lab		
6	Dynamo DB	The lesson will help users understand about Dynamo DB a fully managed NOSQL database service. User will also covert core components, Primary and Secondary Indexes, Query and Scan Operations in Dynamo DB. Learn on Read/Write Operations. Dynamo DB access control and data migration and Web identity federation using third party identity providers.		6.01	Basic concepts and Overview of Dynamo DB.		
				6.02	Core components of Dynamo DB.		
				6.03	DynamoDB Primary and Secondary Indexes.		
				6.04	Purpose of Query and Scan Operations.		
				6.05	Quiz: test your knowledge of concepts of Dynamo DB		
				6.06	management of Capacity and Throughput in Dynamo DB		
				6.07	Overview of Read/Write Operations.		
				6.08	Quiz: test your knowledge of concepts of Dynemo DB Capacity and Throughput	Day 4	
				6.09	Dynamo DB access control and data migration		
				6.1	Web identity federation using third party identity providers		
				6.11	Quiz: test your knowledge of access control and data migration		
				6.12	Practice Assignment: Dynamo DB		
				6.13	QUIZ: Test your knowledge of Dynamo DB		
				6.14	AWS Dynamo DB Key Takeaways		
			180	6.15	Lab		Demo 1-Amazon DynamoDB Creation and Usage
7	Cost Management	The lesson will show users the various options AWS offers for Billing and Cost Management for AWS accounts and what are the various ways in which user can get discounts on their account by using various AWS feature. User will also learn about how the features of AWS Trusted Advisor can help an AWS account		7.01	AWS Support Plans for different AWS Account: Basic, Developer, Business and Enterprise		
				7.02	Billing and Cost Management for AWS Console		
				7.03	AWS Consolidated Billing.		
				7.04	Volume Discounts features and benefits for AWS Account		
				7.05	AWS Trusted Advisor Services		
				7.06	QUIZ: test your knowledge on AWS accounts and billing	Day 5	
				7.07	Practice Assignment AWS Cost Management and Billing		
				7.08	QUIZ: Test your knowledge on AWS Cost Management.		
				7.09	AWS Cost Management Takeaways		
			180	7.1	Lab		Demo 1-Cost Management and Consolidated Billing
8	Application Services	The lesson will inform and demonstrate to users how Amazons suite of Application Services can be used to integrate your AWS resources and will tie together concepts learnt in previous lessons about designing cloud services. User will learn about SQS, SNS and SWF message lifecycle.		8.01	Basic concepts and Overview of SQS.		
				8.02	SQS Architecture and features.		
				8.03	Queue and Message services for SQS.		
				8.04	Quiz: test your knowledge of SQS features.		
				8.05	Management of SQS Visibility Timeout.		
				8.06	SQS message Lifecycle, Dead Letter with Delay Queues.		
				8.07	SQS Long Polling and important facts.		
				8.08	QUIZ: Test your knowledge on long pooling.		
				8.09	SNS services and its core components		
				8.1	Compared SNS and SQS	Day 6	
				8.11	QUIZ: Test your knowledge on SNS		
				8.12	SWF services and its core components		
				8.13	Compare SWF with SQS.		
				8.14	QUIZ: Test your knowledge on SWF		
				8.15	Practice Assignment: SQS Queue		
				8.16	QUIZ: Test your knowledge of Application Services		
				8.17	Application Services Key Takeaways		Demo 1-Amazon SNS and SQS
			180	8.18	Lab		
9	Management Tools, Lambda and Kinesis	The lesson will help users understand about Management Tools, Cloud Formation, Beanstalk Lambda and Kinesis. User will learn on Stacks in CLoudfromation, Core components of beanstalk and Lambda. On Kinesis and Kinesis Client Library		9.01	AWS CloudFormation Features and Template.		
				9.02	AWS Cloud Formation Stacks and how to work with them.		
				9.03	QUIZ: Test your knowledge on Cloud Formation Features and Template		
				9.04	Elastic Beanstalk overview and its Core Components		
				9.05	Elastic Beanstalk Architecture and supporting Platforms.		
				9.06	Manage Beanstalk Environments.		
				9.07	QUIZ: Test your knowledge on Elastic Beanstalk		
				9.08	Manage Lambda Environments and its features.		
				9.09	QUIZ: Test your knowledge on Lambda		Demo 1-AWS CloudFormation Setup and Usage
				9.1	Overview of Kinesis and Kinesis Client Library		Demo 2-AWS Beanstalk Setup and Usage
				9.11	Cloud Formation, Lambda and Kinesis Key Takeaways		Demo 3-AWS Lambda Setup and Usage
				9.12	QUIZ: Test your knowledge on Lambda		
				9.13	Practice Assignment: Cloud Formation Stacks		
				9.14	QUIZ: Test your knowledge of Management Tools, Cloud Formation, Beanstalk Lambda and Kinesis.		
			60	9.15	Lab		
10	AWS Software Development Kit and Command Line Interface	The lesson will help users understand about AWS Software Development Kit and Command Line Interface. User will be able to identify the different programming languages SDK supports and its installation. On management of access credentials. User will learn on how SDK works with other AWS services. Working with Command Line Interface and managing AWS services.		10.01	Overview of AWS SDK (Software Development Kit)	Day 7	
					Different programming languages SDK supports.		
				10.02	Install AWS SDK for PHP, to configure it and to setup it up.		
				10.03	AWS SDK use with client objects.		
				10.04	Manage access credentials for SDK.		
				10.05	Review AWS SDK for Python or Boto, and its use for service operations.		
				10.06	QUIZ: Test your knowledge on AWS SDK PHP		
				10.07	Command Line Interface its installation and setup.		Demo 1-Install,Configure and Use AWS CLI
				10.08	Command Line Interface Service Operations.		Demo 2-Install,Configure and Use AWS SDK
				10.09	QUIZ: Test your knowledge on CLI		
				10.1	Practice Assignment: SDK using Boto 3,		
				10.11	QUIZ: Test your knowledge of AWS Software Development Kit and Command Line Interface.		
				10.12	AWS Software Development Kit and Command Line Interface Key Takeaways		
			120	10.13	Lab.		
11	Amazon DNS Service Route 53.	The lesson will provide users with an overview of the Amazon DNS service: Route 53. Users will be introduced to the concepts and uses of Route 53 and will learn how it can be used to host your own domain names. User will also learn about routing policies, health checks and Failover Configuration Procedure used for DNS services.		11.01	Basic concepts of Route 53 and its Overview		Demo 1-Route 53 Configuration and Routing Policies
				11.02	Compare Public and Private Hosted Zones.		
				11.03	DNS Resource Record Sets.		
				11.04	Various DNS Routing Policies.		
				11.05	DNS Health Checks for DNS.		
				11.06	Describe DNS Failover Configuration Procedure.		
				11.07	QUIZ: Test your knowledge of Routing Policies		
				11.08	Practice Assignment: Routing Policies Latency time.		
				11.09	QUIZ: Test your knowledge of Amazon DNS service		
				11.1	Amazon DNS service, Route 53 Key Takeaways		
			60	11.11	Lab		
12	Virtual Private Cloud- VPC	The lesson will provide users with details of Amazon Virtual Private Cloud, which allows the creation of custom cloud based networks. Users will become familiar all concepts of VPC, for example subnets, Internet Gateways, Routing Table and Route Priority etc. User will also learn on NAT Gateway and Instance, VPN Connection and VPC peering. On list of various VPC limits.		12.01	Overview of VPC		Demo 1-Creating VPC
				12.02	Types of Subnets and Security Groups.		Demo 2-Advance VPC Concepts
				12.03	Creating and usage of VPC Wizard.		Demo 2-VPC Peering
				12.04	Manually configuring a VPC.		
				12.05	QUIZ: Test your knowledge on Internet Gateway.		
				12.06	Elastic IP for an Instance while creating a VPC		
				12.07	Routing Table and Route Priority for VPC.		
				12.08	Compare NACL with Security Group.		
				12.09	Flow Logs on IP traffic		
				12.10	QUIZ: Test your knowledge on Security Group.		
				12.11	Configure NAT Gateway configuration and Instance.		
				12.12	VPN Connections and VPC Limits.		
				12.13	VPC Peering for VPCs		
				12.14	Default VPC and its characteristics.	Day 8	
				12.15	Practice Assignment: on Creating VPC.		
				12.16	QUIZ: Test your knowledge of AWS VPC.		
				12.17	AWS VPC Key Takeaways.		
			60	12.18	Lab.		
13	AWS Security Features	The lesson will provide users with details of AWS Security, with details on various AWS shared responsibility models. User will also learn on AWS Trusted Advisor Checks. The user will learn on security and Business Continuity Management and Change. AWS Security with other AWS Services		13.01	AWS Security features and its Overview.		
				13.02	Various shared responsibility models.		
				13.03	QUIZ: Test your knowledge of AWS Security Models.		
				13.04	AWS compliance program.		
				13.05	Difference between physical and environmental security.		
				13.06	Business Continuity Management.		
				13.07	Network Security and AWS Access Management.		
				13.08	AWS Trusted Advisor Security service checks		
				13.09	QUIZ: Test your knowledge of AWS Security and Access Management.		
				13.30	AWS Security Services with other Amazon services like: Amazon Simple Storage Service Security, Elastic Block Storage Security and Amazon Elastic Load Balancing Security.		
				13.11	QUIZ: Test your knowledge of AWS Security services and other services.		
				13.12	Describe Amazon Virtual Private Cloud Security, Cloud Front Security and AWS CloudHSM Security		
				13.13	Practice Assignment: on AWS Security data encrypt		
				13.14	QUIZ: Test your knowledge of AWS Security		
				13.15	AWS Security Key Takeaways.		
			50	13.16	Lab.		
14	CloudFront and CloudWatch	The lesson will provide users with details of content delivery network in AWS, Define CloudFront and edge locations, List CloudFront pricing, Identify monitoring with CloudWatch. User will also learn about CloudWatch metrics and CloudWatch logs		14.01	CloudFront	Day 9	
				14.02	QUIZ: Test your knowledge of CloudFront.		
				14.03	CloudWatch		
				14.04	QUIZ: Test your knowledge of CloudWatch.		
				14.05	Practice Assignment: on AWS CloudWatch		
				14.06	QUIZ:Test your knowledge of AWS CloudFront & CloudWatch		
				14.07	AWS CloudFront and CloudWatch Takeaways.		
			30	14.08	Lab.		
15	Troubleshooting	The lesson will provide users with details of content delivery network in AWS, Define CloudFront and edge locations, List CloudFront pricing, Identify monitoring with CloudWatch. User will also learn about CloudWatch metrics and CloudWatch logs		15.01	AWS Support		
			20	15.02	QUIZ:Test your knowledge of AWS CloudFront & CloudWatch		