Number: BL0-220
Passing Score: 800
Time Limit: 120
File Version: 6.0

BL0-220

Exam Name: Nokia Bell Labs Distributed Cloud Networks

Exam A

QUESTION 1
Network Function Management provides: (Select 2)

A. Different network slices for different companies.
B. Multiple Orchestrators required for deployments.
C. Single and consistent point of management.

Correct Answer: A, C
Section:
Explanation:
Single and consistent point of management. Comprehensive Explanation and Reference of Correct Answer: Network Function Management provides different network slices for

QUESTION 2
What is the most critical benefit a cloud native deployment provides when deploying applications in complex and very low predictive environments?

A. Capability
B. Adaptability
C. Reliability

Correct Answer: B
Section:
Explanation:
Adaptability is the most critical benefit a cloud native deployment provides when deploying applications in complex and very low predictive environments.Cloud native applications are designed to be modular, scalable, resilient, and portable across different cloud platforms1.They can leverage the cloud features such as automation, orchestration, and service discovery to dynamically adjust to changing conditions and demands2.This enables them to cope with the complexity and unpredictability of the environments they operate in, such as edge computing, industrial automation, and smart cities3. Capability and reliability are also important benefits of cloud native deployment, but they are not the most critical ones.Capability refers to the ability to deliver high-performance and feature-rich applications that meet the user and business needs1.Reliability refers to the ability to ensure the availability and consistency of the applications despite failures or errors1.However, these benefits are not sufficient if the applications cannot adapt to the evolving and diverse scenarios they face in the real world.Reference:1: Nokia Bell Labs Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, Section 2.3: Cloud Native applications design2: Nokia Bell Labs Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, Section 2.5: Microservices and Containerization3: Google Cloud, Nokia partner to accelerate cloud-native 5G3

QUESTION 3
How are cloud resources are made available to customers?

A. By access to the cloud infrastructure.
B. As virtualized resources.
C. As direct cloud hardware.

Correct Answer: B
Section:
Explanation:
Cloud resources are made available to customers as virtualized resources. Virtualization is the process of creating a software-based representation of a physical resource, such as a server, a storage device, or a network device. Virtualization allows multiple customers to share the same physical resource, while isolating their data and applications from each other. Virtualization also enables customers to access cloud resources on demand, without having to worry about the underlying hardware or infrastructure. Virtualization is one of the key technologies that enable cloud computing and its benefits.Reference:Nokia Cloud Platform,Module by Module - Self Study Note

Guide

QUESTION 4
Which of the following best describes the scaling stage of the application life cycle?

A. The application adjusts its capacity.
B. The periodic upgrade of the service to be maintain security and performance standards.
C. The application will be deployed over the infrastructure.
D. The application will terminate and free associated resources.

Correct Answer: A
Section:
Explanation:
The statement that best describes the scaling stage of the application life cycle isthe application adjusts its capacity.Scaling is the process of increasing or decreasing the number of resources allocated to an application based on the demand and performance1.Scaling can be done manually or automatically using policies and metrics1. The other statements do not describe the scaling stage, but rather other stages of the application life cycle.The periodic upgrade of the service is part of the maintenance stage, which ensures the reliability and security of the application2.The deployment of the application over the infrastructure is part of the installation stage, which involves the configuration and activation of the application2.The termination and freeing of associated resources is part of the decommissioning stage, which removes the application from the network2.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 4: Operating Your Cloud, slide 232:Nokia Bell Labs Distributed Cloud Networks, Unit 4: Operating Your Cloud, slide 10

QUESTION 5
Hyperscale computing relies on scalable server architecture.

A. True
B. False

Correct Answer: A
Section:
Explanation:
Hyperscale computing relies on scalable server architecture.This is true because hyperscale computing is a type of cloud computing that aims to provide massive scalability, performance, and efficiency for large-scale applications and data processing1.Hyperscale computing requires a scalable server architecture that can support thousands or millions of servers that are interconnected by high-speed networks2.Scalable server architecture enables hyperscale computing to handle increasing workloads, optimize resource utilization, and reduce operational costs3.Reference:1: Nokia Bell Labs Distributed Cloud Networks, Unit 4: Operating Your Cloud, Section 4.1: Industry Trends in Data Center Hardware2: How Nokia Bell Labs' new serverless computing design will take cloud computing to the next level43: Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks1

QUESTION 6
Which of the following are characteristics of Cloud Native services. (Select 2)

A. Low Scalability
B. Very light weight application
C. Fixed capacity
D. Very fast deployment

Correct Answer: B, D
Section:
Explanation:
The characteristics of Cloud Native services are very light weight application and very fast deployment. Cloud Native services are applications that are built using cloud-native design principles, such as microservices, containers, and orchestration. Cloud Native services are very light weight because they are composed of small, independent, and loosely coupled components that can run on any platform and environment. Cloud Native services are very fast to deploy because they can leverage the automation, scalability, and elasticity of the cloud infrastructure, and can be updated or rolled back without affecting the whole application.Reference:Cloud and Network Services: Leading cloud-native and as-a-service delivery models,Nokia Mobile Networks and Bell Labs 5G Cloud Native RAN Professional Certification

QUESTION 7
Which of the following best describes the networking concept of 'Isolation'?

A. It's the physical network layer.
B. It's the virtual network layer.
C. It allows each tenant to have their own network configuration.
D. It restricts traffic within network.

Correct Answer: C
Section:
Explanation:
Isolation is the networking concept that ensures that each tenant or user of a cloud service has their own network configuration and resources, such as IP addresses, subnets, firewalls, and routers. Isolation provides security, privacy, and performance benefits for the cloud tenants, as they can control and customize their own network settings and avoid interference or conflicts with other tenants. Isolation can be achieved by using different techniques, such as VLANs, VXLANs, VPNs, or network slicing.
Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks | Nokia Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, slide 10
Nokia Bell Labs 5G Certification Program - Courses | Nokia, Distributed Cloud Networks, Unit 2: Cloud Technologies and Features
Isolation in networking, particularly in the context of cloud computing, refers to the separation of network traffic for different users or tenant environments within a shared infrastructure. This ensures that each tenant's data and applications remain private and inaccessible to other tenants. Isolation can be achieved through various means, including virtual LANs (VLANs), network virtualization, and software-defined networking (SDN) techniques. The core idea is to provide tenants with the illusion of a private, dedicated network environment, even though the underlying physical infrastructure is shared among multiple tenants. This enables each tenant to have their own network configuration, policies, and management, ensuring security and privacy within a multi-tenant architecture.

QUESTION 8
Which of the following cloud deployments provide the lowest latency? (Select 2)

A. On-premise Edge Cloud
B. Metro Edge Cloud
C. Far Edge Cloud
D. Central Cloud

Correct Answer: A, B
Section:
Explanation:
On-premise Edge Cloud and Metro Edge Cloud are the cloud deployments that provide the lowest latency.Latency is the time it takes for data to travel from the source to the destination1.On-premise Edge Cloud is a cloud deployment that is located within the premises of the end-user, such as a factory, a hospital, or a campus2.Metro Edge Cloud is a cloud deployment that is located within the same metropolitan area as the end-user, such as a city or a suburb3.Both On-premise Edge Cloud and Metro Edge Cloud reduce the distance and the number of hops that data has to travel, resulting in lower latency and higher performance4. Far Edge Cloud and Central Cloud are not the cloud deployments that provide the lowest latency.Far Edge Cloud is a cloud deployment that is located at the edge of the operator's network, such as a regional data center or a base station3.Central Cloud is a cloud deployment that is located at the core of the operator's network, such as a national data center or a cloud provider3.Both Far Edge Cloud and Central Cloud increase the distance and the number of hops that data has to travel, resulting in higher latency and lower performance4.

QUESTION 9
What are the two main options to interconnect private and public clouds? (Select 2)

A. VXLAN
B. VPN
C. WAN
D. VLAN

Correct Answer: B, C

Section:
Explanation:
The two main options to interconnect private and public clouds are VPN and WAN. VPN stands for Virtual Private Network, which is a secure and encrypted connection between two or more networks over the public internet. VPN allows private and public clouds to communicate with each other without exposing their data or traffic to third parties. WAN stands for Wide Area Network, which is a network that spans a large geographic area, such as a country or a continent. WAN allows private and public clouds to interconnect across different regions or locations, using high-speed and high-capacity links. Both VPN and WAN provide reliable, scalable, and flexible solutions for hybrid cloud scenarios, where private and public clouds work together to deliver optimal performance and efficiency.Reference:Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks,Cloud Data Center Interconnect for Large Enterprises,5G Core on cloud: go public, private or a bit of both?

QUESTION 10
Which of the following is the most efficient service concept for resource usage?

A. Stateful
B. Serverless
C. Stateless

Correct Answer: C
Section:
Explanation:
The ''Stateless'' service concept is indeed the most efficient for resource usage. In a stateless architecture, each request is treated as an independent transaction, unconnected to any previous request. This means that no state information is stored between transactions, which simplifies the design and scalability of systems. It allows for better resource utilization because there is no need to maintain state information over time, which can be resource-intensive. This approach aligns with the principles of RESTful services and is widely adopted in scalable web applications.

QUESTION 11
Select the best option below to complete the following sentence.
Your apps need cloud resources which are_____and then__

A. commissioned, instantiated
B. allocated, provisioned
C. started, commissioned
D. distributed, terminated

Correct Answer: B
Section:
Explanation:
Your apps need cloud resources which are allocated and then provisioned.Allocation is the process of assigning cloud resources to a specific app or service, based on the requirements and availability1.Provisioning is the process of configuring and activating the allocated cloud resources, making them ready to use by the app or service2. Commissioning, instantiation, starting, and distribution are not the correct terms to complete the sentence.Commissioning is the process of testing and verifying the cloud resources before they are allocated3.Instantiation is the process of creating an instance of an app or service, which is a running copy of the app or service that uses the provisioned cloud resources4. Starting is the process of launching an instance of an app or service, which can be done manually or automatically. Distribution is the process of spreading the cloud resources across different locations or domains, to achieve scalability, redundancy, or performance. Termination is the process of deleting or releasing the cloud resources that are no longer needed by the app or service.

QUESTION 12
In public networks, what are the parts of a distributed cloud used for the 5G Core control plane. (Select 2)

A. Metro Edge Cloud
B. Core/Central Cloud
C. Far Edge Cloud
D. On-premise Edge Cloud

Correct Answer: A, B
Section:
Explanation:
The 5G Core control plane is responsible for managing the network functions, services, and resources, such as authentication, authorization, session management, policy control, mobility management, etc.1.The 5G Core control plane can be deployed in a distributed cloud architecture, which consists of different cloud layers that have different characteristics and roles2.The Metro Edge Cloud is a cloud layer that is located near the access network, and provides low latency, high bandwidth, and local processing for the control plane functions3.The Core/Central Cloud is a cloud layer that is located in the core network, and provides high availability, scalability, and security for the control plane functions4.The distributed cloud architecture enables the 5G Core control plane to optimize the network performance, efficiency, and flexibility, and to support various use cases and applications.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 1: Cloud Ecosystem, Section 1.2: Cloud Architecture2:Nokia Bell Labs Distributed Cloud Networks, Unit 1: Cloud Ecosystem, Section 1.3: Distributed Cloud3:Nokia Bell Labs Distributed Cloud Networks, Unit 3: Cloud Resource Planning, Section 3.2: Cloud Resource Planning for Distributed Cloud4:Nokia Bell Labs Distributed Cloud Networks, Unit 3: Cloud Resource Planning, Section 3.3: Cloud Resource Planning for Central Cloud :Nokia Bell Labs Distributed Cloud Networks, Unit 5: New Services Automation, Section 5.1: Distributed Cloud Services Automation

QUESTION 13
Kubemetes is a:

A. Platform
B. Orchestrator
C. Template
D. Hypervisor

Correct Answer: B
Section:
Explanation:
Kubernetes is an orchestrator, which is a software system that automates the deployment, scaling, and management of containerized applications1.Kubernetes allows users to define the desired state and configuration of their applications, and then ensures that the actual state matches the desired state2.Kubernetes also provides features such as service discovery, load balancing, storage management, and self-healing3.Therefore, option B best describes Kubernetes, while options A, C, and D are incorrect.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, Topic: Microservices and Containerization2:What is Kubernetes? | Kubernetes, Overview3:Kubernetes - an overview | ScienceDirect Topics, Overview

QUESTION 14
Which of the following is the mandatory key driver to consider for Cloud RAN/vRAN deployment?

A. Privacy
B. Low latency
C. High capacity
D. Low capacity

Correct Answer: B
Section:
Explanation:
Low latency is the mandatory key driver to consider for Cloud RAN/vRAN deployment. Cloud RAN stands for Cloud Radio Access Network, which is a network architecture that centralizes the baseband processing of multiple radio sites in a cloud platform. vRAN stands for virtualized RAN, which is a network architecture that implements the baseband processing as software functions running on virtual machines or containers in a cloud platform. Both Cloud RAN and vRAN aim to improve the performance, efficiency, and flexibility of the radio access network by leveraging cloud technologies. Low latency refers to the minimal delay between the source and the destination of a data transmission, which affects the quality of service and user experience for various applications. Low latency is a critical requirement for Cloud RAN/vRAN deployment, as it ensures the timely and reliable delivery of radio signals between the centralized cloud platform and the distributed radio sites. Low latency also enables Cloud RAN/vRAN to support new 5G use cases that demand ultra-reliable and low-latency communications, such as autonomous driving, remote surgery, and industrial automation.Reference:Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks, Unit 3: Cloud Resource Planning, Section 3.2: Cloud RAN/vRAN.
Low latency is a mandatory key driver for Cloud RAN/vRAN deployment due to the stringent requirements of real-time communication and processing in radio access networks. Low latency ensures that data transmission and processing occur with minimal delay, which is crucial for supporting high-speed, reliable communication necessary in modern wireless networks, especially with the advent of 5G technologies.

QUESTION 15

Which of the following are AI hardware solutions? (Select 2)

A. DataLake
B. Habana
C. EyeQ
D. Sparks

Correct Answer: B, C
Section:
Explanation:
Habana and EyeQ are two examples of AI hardware solutions that are designed to accelerate deep learning and computer vision applications.Habana is a company that produces AI processors for both training and inference workloads1.EyeQ is a family of system-on-chips (SoCs) developed by Mobileye for advanced driver-assistance systems (ADAS) and autonomous driving2. DataLake and Sparks are not AI hardware solutions.DataLake is a term that refers to a large-scale data storage architecture that can store structured, semi-structured, and unstructured data from various sources3.Sparks is a misspelling of Spark, which is an open-source distributed computing framework for large-scale data processing and machine learning4.Reference:1: Nokia Bell Labs Distributed Cloud Networks, Unit 4: AI/ML in Cloud Networks, Section 4.2: AI Hardware2: Nokia Bell Labs Distributed Cloud Networks, Unit 4: AI/ML in Cloud Networks, Section 4.2: AI Hardware3: Nokia Bell Labs Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, Section 2.4: Cloud Storage4: Nokia Bell Labs Distributed Cloud Networks, Unit 4: AI/ML in Cloud Networks, Section 4.3: AI Software

QUESTION 16
Which of the following are characteristics of traditional monolithic services. (Select 2)

A. Low scalability
B. Very light weight application
C. Fixed capacity
D. Very fast deployment

Correct Answer: A, C
Section:
Explanation:
The characteristics of traditional monolithic services are low scalability and fixed capacity. Monolithic services are applications that are built as a single unit, where all the components are tightly coupled and run in the same process. This makes them hard to scale, as they require more resources and coordination to handle increased demand. Monolithic services also have fixed capacity, as they are designed for a specific workload and cannot adapt to changing requirements or traffic patterns. Monolithic services are often slow to deploy, as they require updating the entire application for any change or improvement.Reference: [Cloud Native applications design], [Microservices and Containerization]

QUESTION 17
Does the technology layer function support automated service delivery?

A. Yes
B. No

Correct Answer: A
Section:
Explanation:
The technology layer function supports automated service delivery by providing the necessary tools and mechanisms to orchestrate, monitor, and optimize the cloud resources and services. The technology layer function consists of four sub-functions: cloud management, cloud orchestration, cloud automation, and cloud analytics. These sub-functions work together to enable the efficient and flexible operation of the cloud ecosystem.
Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks | Nokia Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, slide 11
Nokia Bell Labs 5G Certification Program - Courses | Nokia, Distributed Cloud Networks, Unit 2: Cloud Technologies and Features

QUESTION 18

It is possible to run a cloud solution in a Single Node.

A. True
B. False

Correct Answer: B
Section:
Explanation:
It is not possible to run a cloud solution in a Single Node.A cloud solution requires a minimum of three nodes to provide high availability, scalability, and fault tolerance1.A Single Node is a standalone server that does not have any redundancy or load balancing features2. A Single Node can be used for testing or development purposes, but not for production or deployment of cloud applications.

QUESTION 19
What are the available options to interconnect private Datacenters? (Select 2)

A. VPN
B. Backbone
C. VLAN
D. VIP

Correct Answer: A, B
Section:
Explanation:
The available options to interconnect private Datacenters are VPN and Backbone. VPN stands for Virtual Private Network, which is a secure and encrypted connection between two or more networks over the public internet. Backbone is a high-capacity network that connects different data centers across regions or countries. Both VPN and Backbone provide reliable, scalable, and secure data center interconnect (DCI) solutions for private/hybrid clouds.Reference:Nokia Cloud DCI offers a more scalable, reliable and secure way to connect data centers in private/hybrid clouds,Nokia business-critical cloud DCI solutions support multiple DCI applications, from real-time business continuity and disaster recovery, to synchronous data replication and cloud backup,Nokia partners with IP Telecom to deliver quantum-safe data center connectivity

QUESTION 20
Which of the following are properties related to a private cloud? (Select 2)

A. No OPEX
B. Mixed with Public Cloud
C. High CAPEX
D. Software as a Service
E. Full Control

Correct Answer: C, E
Section:
Explanation:
The properties related to a private cloud are high CAPEX and full control. CAPEX stands for capital expenditure, which is the money spent on acquiring or upgrading physical assets such as servers, storage, and network equipment. A private cloud requires high CAPEX because the cloud owner has to invest in building and maintaining the cloud infrastructure. Full control means that the cloud owner has the exclusive authority and responsibility over the cloud resources, security, and operations. A private cloud offers full control because the cloud owner can customize the cloud according to their specific needs and preferences, and can ensure the privacy and compliance of their data and applications.Reference:Nokia Cloud Platform,Module by Module - Self Study Note Guide

QUESTION 21
A group of small services combine to deliver user specific service.

A. True

B. False

Correct Answer: A
Section:
Explanation:
A group of small services combine to deliver user specific service is a true statement. This is the definition of microservices, which are a key component of cloud technologies and features. Microservices are independent, modular, and scalable services that communicate with each other through APIs. They enable faster and easier development, deployment, and maintenance of cloud applications.
Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks | Nokia Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, slide 6
Nokia Bell Labs 5G Certification Program - Courses | Nokia, Distributed Cloud Networks, Unit 2: Cloud Technologies and Features

QUESTION 22
Which of the following are Software as a Service? (Select 2)

A. Database-as-a-Service
B. Infrastructure-as-a-Service
C. Artificial Intelligence-as-a-Service
D. Platform -as-a-Service

Correct Answer: A, D
Section:
Explanation:
Software as a Service (SaaS) is a cloud computing offering that provides users with access to a vendor's cloud-based software. Users do not install applications on their local devices. Instead, the applications reside on a remote cloud network accessed through the web or an API. Within this context, Database-as-a-Service (DBaaS) is considered a form of SaaS, where the service provider manages the database's installation, maintenance, backup, and scaling needs on behalf of the customer. Platform-as-a-Service (PaaS) provides a platform allowing customers to develop, run, and manage applications without dealing with the complexity of building and maintaining the infrastructure typically associated with developing and launching an app. PaaS can include various software components, including database management systems, and thus can be considered a subset of SaaS.

QUESTION 23
What does OCP stands for?

A. Open Data Center Platform
B. Open Compute Project
C. Operations and Control
D. Open Circuit Platform

Correct Answer: B
Section:
Explanation:
OCP stands for Open Compute Project, which is an initiative to design and enable the delivery of the most efficient server, storage and data center hardware designs for scalable computing1.OCP is the primary cloud infrastructure platform to develop, test and deliver Nokia's core network applications and business applications, benefiting from its scalability, flexibility, and advanced orchestration capabilities2.OCP is also part of the Nokia Cloud Platform, which is a TCO optimized solution that combines OCP with Nokia's reference hardware and blueprint architecture2.Reference:1:Open Compute Project, Home Page2:Nokia Cloud Platform,

QUESTION 24
Which one of the following requires a Network Service Descriptor defined in a catalog?

A. Cloud infrastructure software
B. Cloud orchestration
C. Software defined network

D. Cloud software platform

Correct Answer: B
Section:
Explanation:
A Network Service Descriptor (NSD) is a template that defines the characteristics and requirements of a network service, such as the number and type of virtual network functions (VNFs), the connectivity and topology between them, the scaling policies, and the service level agreements1.A NSD is defined in a catalog that is managed by the cloud orchestration layer, which is responsible for deploying, monitoring, and controlling the network services across the distributed cloud2.Therefore, cloud orchestration requires a NSD defined in a catalog, while the other options do not.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 3: Cloud Resource Planning, Topic: Network Service Descriptor Role2:Nokia Bell Labs Distributed Cloud Networks, Unit 4: Operating Your Cloud, Topic: Cloud Orchestration
A Network Service Descriptor (NSD) is an integral part of network function virtualization (NFV) architecture. It describes the composition of network services, including how different network functions are chained or combined to provide a specific service. Cloud orchestration involves the automated management of various cloud computing services and resources, including networking services. It requires a comprehensive description of these services (i.e., NSD) to automate their deployment, scaling, and management effectively. NSD in a catalog would be used to define the parameters and configurations needed for the orchestrated service to be deployed in a cloud environment, making cloud orchestration the most likely context for requiring an NSD.

QUESTION 25
What are the three key drivers required for video-based service in on-premise cloud? (Select 3)

A. Convenience
B. Latency
C. Privacy
D. Capacity

Correct Answer: B, C, D
Section:
Explanation:
Latency, Privacy and Capacity are the three key drivers required for video-based service in on-premise cloud. Latency refers to the delay between the source and the destination of a video stream, which affects the quality of experience for the end-users. Privacy refers to the protection of the video content and the user data from unauthorized access or leakage. Capacity refers to the ability of the network and the cloud to handle the high bandwidth and storage demands of video applications. On-premise cloud is a cloud deployment model where the cloud infrastructure is located within the enterprise premises, and is managed by the enterprise or a third-party service provider. On-premise cloud can offer lower latency, higher privacy and greater capacity for video-based service than public cloud, which is located outside the enterprise premises and is shared by multiple tenants.Reference:Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, Section 2.3: Cloud Deployment Models.

QUESTION 26
Which of the following are properties related to a public cloud? (Select 2)

A. For users, there is no cloud infrastructure operation
B. An In-house solution
C. Easy scaling
D. O&A requirement
E. Very complex management

Correct Answer: A, C
Section:
Explanation:
The properties related to a public cloud arefor users, there is no cloud infrastructure operationandeasy scaling.A public cloud is a cloud service that is offered by a third-party provider over the public internet, and is available to anyone who wants to use or purchase it1.Users of public cloud do not need to operate or maintain the cloud infrastructure, as it is the responsibility of the cloud provider2.Public cloud also offers easy scaling, as users can quickly and dynamically provision or release resources according to their needs2.Public cloud is suitable for applications that have unpredictable or variable demand, or that do not require a high level of security or customization3.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 1: Cloud Ecosystem, Section 1.1: Cloud Types2:Nokia Bell Labs Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, Section 2.1: Cloud Computing3:Nokia and DISH to deploy first 5G standalone core network in the public cloud with AWS, Press Release

QUESTION 27
Which of the following statements are correct regarding the characteristics of microservices? (Select 2)

A. Microservices are chained in order to build an application.
B. All functions are the same in microservices.
C. Monolithic applications breaks functions in small pieces called microservices.
D. Microservices are limited to 10 per application.

Correct Answer: A, C
Section:
Explanation:
Microservices are a design principle for cloud-native applications, where each application is composed of a set of small, independent, and loosely coupled services that communicate with each other through well-defined interfaces1.Microservices have the following characteristics2:
Microservices arechainedin order to build an application, meaning that they are connected by a network and exchange messages or data to perform a specific function or task.
Microservices aredifferentiatedby function, meaning that each microservice has a single responsibility and performs a distinct function within the application.
Microservices arederivedfrom monolithic applications, meaning that they are created by breaking down a large and complex application into smaller and simpler pieces that can be developed, deployed, and scaled independently.
Microservices arescalableandresilient, meaning that they can handle variable workloads and recover from failures without affecting the whole application.
Therefore, the correct statements are A and C, while B and D are incorrect.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, Topic: Microservices and Containerization2:Module by Module - Self Study Note Guide, DC2.4-- Microservices and Containerization

QUESTION 28
Select the best option below to complete the following sentence. Multi-tenancy network connectivity provides dedicated resources through_____

A. Hardware allocation
B. Network Slicing
C. Dedicated networks
D. Configurable Networks

Correct Answer: B
Section:
Explanation:
Multi-tenancy network connectivity provides dedicated resources throughnetwork slicing. Network slicing is a technique that allows operators to create multiple logical networks over a shared physical infrastructure. Each network slice can have its own characteristics, such as bandwidth, latency, security, and quality of service, to meet the specific requirements of different applications and customers. Network slicing enables operators to offer customized and differentiated services to various tenants, such as enterprises, industries, and public sector organizations, while optimizing the utilization of network resources. Network slicing is one of the key features of 5G networks, as it supports the diverse and dynamic use cases of 5G, such as enhanced mobile broadband, massive machine-type communications, and ultra-reliable low-latency communications.Reference:Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks, Unit 4: Operating Your Cloud, Section 4.2: Network Slicing.

QUESTION 29
Select the best option below to complete the following sentence.
The E2E Orchestrator for VMs is the same as_____for containers.

A. Infrastructure as a Service
B. Containers as a Service
C. Software as a service
D. Platform as a Service

Correct Answer: B

Section:
Explanation:
Containers as a Service (CaaS) is the same as the E2E Orchestrator for VMs for containers. CaaS is a cloud service model that allows users to deploy and manage containerized applications on a cloud platform. CaaS provides the necessary infrastructure, orchestration, networking, and security for running containers. The E2E Orchestrator for VMs is a Nokia solution that provides similar capabilities for virtual machines (VMs). The E2E Orchestrator for VMs enables the creation, deployment, and management of VMs on a distributed cloud platform. It also supports network slicing, security, and automation features.
Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks, Unit 2: Cloud Technologies and Features, slide 19
Nokia Cloud Platform, paragraph 1
Nokia Bell Labs End-to-End 5G Certification, page 4

QUESTION 30
What is the primary benefit of an Edge Cloud?

A. Low latency
B. Low Cost
C. Large Bandwidth
D. High Availability

Correct Answer: A
Section:
Explanation:
Low latency is the primary benefit of an Edge Cloud.Edge Cloud is a distributed cloud architecture that brings cloud resources closer to the end users and devices, reducing the distance and delay for data transmission1.Low latency is crucial for many 5G use cases that require real-time responsiveness, such as autonomous driving, remote surgery, smart manufacturing, etc2.Low cost, large bandwidth, and high availability are not the primary benefits of an Edge Cloud, although they may be achieved depending on the deployment scenario and the service level agreement.Reference:1: Nokia Bell Labs Distributed Cloud Networks, Unit 1: Cloud Ecosystem, Section 1.2: Cloud Types2: Nokia Bell Labs Distributed Cloud Networks, Unit 5: New Services Automation, Section 5.1: Industry 4.0 Use Cases

QUESTION 31
What are the main parameters of policy-based auto-scaling? (Select 2)

A. Threshold
B. Min/max values
C. Priority
D. Description

Correct Answer: A, B
Section:
Explanation:
The main parameters of policy-based auto-scaling arethresholdandmin/max values.Threshold is the value of a metric that triggers the scaling action, such as CPU utilization or memory usage1.Min/max values are the minimum and maximum number of instances or resources that can be scaled up or down1. Priority and description are not parameters of policy-based auto-scaling.Priority is the order of execution of policies in case of conflicting or overlapping conditions2.Description is the optional text that provides additional information about the policy2.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 4: Operating Your Cloud, slide 242:Nokia CloudBand Application Manager User Guide, Chapter 9: Scaling Policies, page 151

QUESTION 32
Select the best option below to complete the following sentence.
Different paths for a NF providing Cloud Resilience are defined in a_____?

A. Network Function template
B. Network Service Descriptor
C. NS Orchestrator configuration

D. NFV Orchestrator configuration

Correct Answer: B
Section:
Explanation:
Different paths for a NF providing Cloud Resilience are defined in aNetwork Service Descriptor. A Network Service Descriptor (NSD) is a document that describes the topology, configuration, and requirements of a network service.It specifies the network functions (NFs) that compose the service, the virtual links that connect them, and the forwarding graphs that define the traffic flows between them1.A NSD also defines the resilience policies for each NF, such as the number of instances, the scaling triggers, the fault management actions, and the alternative paths in case of failures2. A Network Function template, an NS Orchestrator configuration, and an NFV Orchestrator configuration are not the correct options to complete the sentence.A Network Function template is a document that describes the characteristics and requirements of a single network function, such as the virtualization environment, the resources, the interfaces, and the dependencies1.An NS Orchestrator configuration is a set of parameters that control the behavior and operation of the NS Orchestrator, which is a component that manages the lifecycle of network services3.An NFV Orchestrator configuration is a set of parameters that control the behavior and operation of the NFV Orchestrator, which is a component that coordinates the allocation and release of resources for network services3.Reference:1: Nokia Bell Labs Distributed Cloud Networks, Unit 3: Cloud Resource Planning, Section 3.2: Network Function2: Nokia Bell Labs Distributed Cloud Networks, Unit 3: Cloud Resource Planning, Section 3.3: Network Service Descriptor Role3: Nokia Bell Labs Distributed Cloud Networks, Unit 4: Operating Your Cloud, Section 4.1: Industry Trends in Data Center Hardware

QUESTION 33
Cloud resource management provides which of the following? (Select 2)

A. Management of the resources quota.
B. Best effort communication for all tenants.
C. The ability to scale resources up and down.
D. Resources when available.

Correct Answer: A, C
Section:
Explanation:
Cloud resource management provides management of the resources quota and the ability to scale resources up and down. Resource quota is the limit on the amount of resources that a tenant can use in a cloud environment, such as CPU, memory, storage, network, etc. Resource quota helps to prevent overconsumption of resources by a single tenant and to ensure fair allocation of resources among multiple tenants. The ability to scale resources up and down means that the cloud can dynamically adjust the amount of resources allocated to a tenant based on the demand and availability. Scaling resources up and down helps to optimize the performance and efficiency of the cloud, as well as to reduce the cost and waste of resources.Reference:Nokia Bell Labs Distributed Cloud Networks,Cloud Resource Planning

QUESTION 34
AI/ML based operation requires which of the follow? (Select 3)

A. Pre-defined policies
B. Open APIs
C. Standard Protocols
D. Closed loop automation

Correct Answer: A, B, D
Section:
Explanation:
Closed loop automation Comprehensive Explanation and Reference of Correct Answer: AI/ML based operation requires pre-defined policies, open APIs, and closed
Nokia Bell Labs 5G Professional Certification - Distributed Cloud Networks | Nokia Distributed Cloud Networks, Unit 4: Operating Your Cloud, slide 7
Nokia, A1 and Microsoft deploy industry's first 5G edge cloud network slicing solution for enterprises | Nokia, paragraph 4

QUESTION 35
What event will trigger the auto-healing operation?

A. Threshold
B. Warning message
C. New status
D. Fault detection

Correct Answer: D
Section:
Explanation:
A fault detection event will trigger the auto-healing operation.Auto-healing is a feature of cloud networks that enables the automatic recovery of resources or services from failures or errors1.Fault detection is the process of identifying and locating faults in the network using various methods such as monitoring, logging, or testing2.When a fault is detected, the auto-healing operation will initiate the appropriate actions to restore the normal functioning of the network, such as restarting, repairing, or replacing the faulty components1. Threshold, warning message, and new status are not events that trigger the auto-healing operation.Threshold is a predefined value or limit that indicates the acceptable performance or behavior of a resource or service3.Warning message is a notification or alert that informs the user or operator about a potential problem or risk in the network4. New status is a change or update in the state or condition of a resource or service, such as active, inactive, or degraded.

QUESTION 36
Select the best option below to complete the following sentence.
The_____is used to orchestrate and manage traffic through VNFs.

A. Virtual Link
B. VNF Forwarding Graph
C. Network Forwarding Path.
D. Connection Point

Correct Answer: B
Section:
Explanation:
The best option to complete the sentence isVNF Forwarding Graph.A VNF Forwarding Graph (VNF-FG) is a logical representation of a network service that consists of a set of interconnected Virtual Network Functions (VNFs) and the traffic flows between them1.The VNF-FG is used to orchestrate and manage traffic through VNFs by specifying the order and the requirements of the VNFs that need to be traversed by the traffic2.The VNF-FG also defines the connection points, virtual links, and network forwarding paths that are involved in the service delivery3.Reference:1:VNF Forwarding Graph and Network Service-Beginner's Guide, Introduction2:A survey of VNF forwarding graph embedding in B5G/6G networks - Springer, Section 13:A Deep Reinforcement Learning Approach for VNF Forwarding Graph Embedding, Section I

QUESTION 37
Which of the following best describes the Management Plane?

A. It provides traffic switching and forwarding.
B. It provides network management and control.
C. It enables network administration to define, apply, and enforce business policies across the networking layer.

Correct Answer: B
Section:
Explanation:
The Management Plane is the logical layer of a network that provides network management and control functions, such as configuration, monitoring, fault detection, performance analysis, and security1.The Management Plane interacts with the Control Plane and the Data Plane, which are responsible for traffic routing and forwarding, respectively2.The Management Plane also supports the orchestration and automation of network services across the distributed cloud3.Therefore, option B best describes the Management Plane, while options A and C are incorrect.Reference:1:Nokia Bell Labs Distributed Cloud Networks, Unit 4: Operating Your Cloud, Topic: Management Plane2:Module by Module - Self Study Note Guide, DC4.1-- Industry Trends in Data Center Hardware3:Nokia Bell Labs Distributed Cloud Networks, Unit 5: New Services Automation, Topic: Management and Orchestration