Duration: 20 minutes (maximum) Total Marks: 10\*2 = 20

Name: Employee Id:

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1. What are the principle of Microservice Architecture, from the following options? (Select all that apply)
   1. Scalability
   2. Resiliency
   3. Autonomy
   4. Load Balancing

**Answer:**

1. Which of the following options depict the name of different types of containers?
   1. .NET Core
   2. Core OS rkt (Rocket)
   3. Docker
   4. Linux VServer

**Answer:**

1. What are the correct differences, from the following options, between Virtual Machine (VM) and Container?
   1. Virtual machines (VM) are managed by a hypervisor and utilize VM hardware, while container systems provide operating system services from the underlying host and isolate the applications using virtual-memory hardware
   2. Applications running in a container environment share an underlying operating system, while VM systems can run different operating systems.
   3. Typically a VM will host multiple applications whose mix may change over time versus a container that will normally have a single application. However, it’s possible to have a fixed set of applications in a single container.
   4. All of them are correct differences

**Answer:**

1. What are the different types of Point to Point Communication between microservices?
   1. One receiver and many sender
   2. One sender and many receiver
   3. Many sender and many receiver
   4. None of them

**Answer:**

1. Which one(s) of the following, act(s) as a message broker?
   1. Appache ActiveMQ
   2. RabbitMQ
   3. Redis
   4. Appache Kafka

**Answer:**

1. What are the different types of Load Balancing mechanism available?
   1. Client side
   2. Server side
   3. Only client side
   4. Only server side

**Answer:**

1. Which statements are true about CQRS (Command and Query Responsibility Segregation)?
   1. DDD (Domain Driven Design) can be considered a foundational principle for CQRS
   2. It is about methods within the same object being either queries or commands
   3. Even a single repository pattern object can comply with CQS
   4. None of them are true

**Answer:**

1. Which are the options available for Orchestration Support in Visual Studio for orchestration of multi-container application?
   1. Docker compose
   2. Service Fabric
   3. Kubernetes/ Helm Chart
   4. All of them

**Answer:**

1. Which of the following options is/are the feature(s) of API Gateway Pattern?
   1. Reverse proxy or gateway routing
   2. Producing Event Bus
   3. Requests aggregation
   4. Load Balancing

**Answer:**

1. What are the reasons, from the following, which leads to necessity of Service Registry and Discovery?
   1. Service instances have dynamically assigned network locations
   2. the set of service instances changes dynamically because of auto scaling, failures, and upgrades
   3. Both of them
   4. None of them

**Answer:**