

NPTEL Cloud Computing – Week 2

1. Service-Oriented Architecture (SOA) possesses _____.

A) A service provider, service requestor and service broker

B) A service provider and service requestor

C) A service requestor and service broker

D) Only a service broker

Explanation: SOA is a design pattern based on distinct pieces of software providing application functionality as services to other applications. The key components include a service provider, service requestor, and service broker.

2. XML is designed to describe _____.

A) pricing

B) SLA

C) data

D) service

Explanation: XML (eXtensible Markup Language) is designed to store and transport data. It focuses on what data is and is used to encode documents in a format that is both human-readable and machine-readable.

3. SOAP (Simple Object Access Protocol) does not restrict the endpoint implementation technology choices. SOAP is a platform-neutral choice.

A) True

B) False

Explanation: SOAP is designed to be platform- and language-neutral, allowing different software applications to communicate over a network. It uses XML to encode its HTTP-based messages, ensuring compatibility across different systems.

4. A Cyber Physical Cloud Computing (CPCC) architectural framework is a _____ environment that can rapidly build, modify and provision cyber-physical systems composed of a set of _____ based sensor, processing, control, and data services.

A) system, cloud computing

B) cloud computing, system

C) system, edge computing

D) edge, system computing

Explanation: Cloud Computing (CPCC) architectural framework as “a system environment that can rapidly build, modify and provision auto-scale cyber-physical systems, composed of a set of cloud computing-based sensor, processing, control, and data services”

5. Network Virtualization is a _____ environment that allows _____ service providers to dynamically compose _____ virtual networks.

- A) networking, single, single
- B) physical, single, multiple
- C) networking, multiple, single

D) networking, multiple, multiple

Explanation: Network virtualization involves creating virtual networks that operate independently of the physical network infrastructure, allowing multiple service providers to manage multiple virtual networks.

6. Customized wearable devices for collecting health parameters are the best examples of _____.

- A) IoHT**
- B) Fog device
- C) Fog-Cloud interfaced
- D) Cloud-Fog-Edge-IoHT

Explanation: Wearable devices, such as fitness trackers and smartwatches, are part of the Internet of Things (IoT) ecosystem, designed to collect and exchange data over the internet.

7. Dew Computing is a paradigm where on-premises computers provide functionality that is _____ of cloud services and is also collaborative with cloud services.

- A) dependant
- B) independent**
- C) partial dependant
- D) none of these

Explanation: Dew Computing involves leveraging local (on-premises) resources that can operate independently but still collaborate with cloud-based services for enhanced functionality.

8. SOAP uses _____ as transport protocol.

- A) UDDI
- B) SLA
- C) HTTP**
- D) XML

Explanation: SOAP typically uses HTTP as its transport protocol, making it easy to pass through firewalls and proxies without modification.

9. Virtual Machine Monitor is also known as _____.

- A) Cluster Manager
- B) Virtual Machine Handler
- C) Virtual Machine Manager

D) Hypervisor

Explanation: A Virtual Machine Monitor (VMM), or hypervisor, is software that creates and runs virtual machines. It abstracts the physical hardware to provide virtual hardware to each VM.

10. Which of the following is/are XML parser API(s)?

A) XaaS (Anything as a Model)

B) SAX (Simple API to XML)

C) CLI (Command Line Interface)

D) DOM (Document Object Model)

Explanation: SAX (Simple API for XML) is a common API used for parsing XML documents. It is event-driven and provides a mechanism for parsing XML documents in a memory-efficient way.