

Marks Scored:

KATHMANDU UNIVERSITY
End Semester Examination
March/ April, 2017

Level : B. E./B. Sc.
Year : IV

Course : COMP 478
Semester : I

Exam Roll No. : Time: 30 mins.

F. M. : 10

Registration No.:

Date : APR 13 2017

SECTION "A"

[20 Q × 0.5 = 10 marks]

Select appropriate answer(s).

1. What is a common trait of cloud architectures?
[a] It dictates monolithic application designs.
[b] It must use publicly accessible computing resources.
[c] A fixed set of computing resources is pre-allocated to each application.
[d] While in operation the application automatically scales up or down based on resource needs.
2. Which cloud computing feature allows for server consolidation resulting in increased asset utilization and decrease data center energy needs?
[a] Virtualization [b] Provisioning [c] Automation [d] Governance
3. Which statement is true about the Platform as a Service cloud computing delivery model?
[a] It provides a virtual machine and storage so that computing platforms can be created.
[b] It provides the entire infrastructure along with a completed application that is accessible using a web based front end.
[c] It is required by the infrastructure as a service delivery model so that end user applications can be delivered on the cloud.
[d] It provides a runtime environment for applications and includes a set of basic services such as storage and databases.
4. A company is considering a cloud environment to improve the operating efficiency for their data and applications. The company is part of an industry where strict security and data privacy issues are of the highest importance. Which type of cloud would be a good choice?
[a] Hybrid cloud [b] Public cloud [c] Governed Cloud [d] Private cloud
5. Which one of the following clouds relates to Amazon EC2, Force.com, and Google App Engine?
[a] Hybrid Cloud [b] Private cloud [c] Public Cloud [d] Community Cloud
6. Which of the following has greater size according to operations?
[a] Cluster computing [b] Distributed computing
[c] Grid computing [d] Parallel computing
7. Interoperability is enabled by _____.
[a] A composite cloud [b] Middleware
[c] A cloud operating system [d] A community cloud

8. Which statements is true about sharing resources in cloud computing and cluster computing environments?
- [a] File systems are normally shared in a cloud computing environment but not in a cluster computing environment.
 - [b] File systems are normally shared in a cluster computing environment but not in cloud computing environment.
 - [c] File systems are not shared in cluster computing or cloud computing environments.
 - [d] File systems are normally shared in a cluster computing and cloud computing environment.
9. What is the type of cloud service where setups is shared between many organizations ?
- [a] Internal Cloud
 - [b] External Cloud
 - [c] Hybrid cloud
 - [d] Community cloud
10. Which of the following is prone to security attacks?
- [a] Private
 - [b] Public
 - [c] Hybrid
 - [d] Community
11. Any time if there are significant spikes in cloud hosting of website can be addressed by
- [a] IAAS
 - [b] PAAS
 - [c] XAAS
 - [d] SAAS
12. In cloud services, use of elasticity to prevent DDOS could be opportunity regarding the obstacle
- [a] Data confidentiality and auditability
 - [b] Performance unpredictability
 - [c] Availability of services
 - [d] Data lock-in
13. Which of the following cannot be considered as obstacle in cloud computing?
- [a] Data Transfer bottlenecks
 - [b] Software licensing
 - [c] Limited resource
 - [d] Bugs in Larger Distributed systems
14. Virtualization layer generally consists of a software layer which is called
- [a] Virtual machine
 - [b] Operating system
 - [c] Hypervisor
 - [d] System software
15. The guest software runs in their own isolated domains in__
- [a] Full Virtualization
 - [b] Paravirtualization
 - [c] Emulation Virtualization
 - [d] Optimal Virtualiation
16. The mean time between failures of a cloud services gives _____ of the service.
- [a] Reliability
 - [b] Availability
 - [c] Scalability
 - [d] Elasticability
17. Hybrid cloud has advantage of _____ over private cloud
- [a] Availability and elasticity
 - [b] Security and elasticity
 - [c] High Availability
 - [d] Transaction time
18. This is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet.
- [a] Platform as a Service (PaaS)
 - [b] Infrastructure as a Service (IaaS)
 - [c] Software as a Service (SaaS)
 - [d] Everything as a Service (XaaS)
19. Which of the following statement is wrong?
- [a] SOA provides the standards that transport the messages and makes the infrastructure to support it possible
 - [b] SOA provides access to reusable Web services over a SMTP network
 - [c] SOA offers access to ready-made, modular, highly optimized, and widely shareable components that can minimize developer and infrastructure cost
 - [d] Service Oriented Architecture (SOA) describes a standard method for requesting services from distributed components and managing the results
20. Geographic distribution of data across a cloud provider's network is a problem for many enterprises because it:
- [a] Breaks compliance regulations
 - [b] Adds latency raises
 - [c] Concerns security
 - [d] Makes data recovery harder

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SECTION "B"
[6Q × 4 = 24 marks]

Answer *ANY SIX* questions.

1. Why are Parallel Computing and Distributed System essential in Cloud Computing?
2. Compare between Cloud Bursting and Cloud Spanning with appropriate examples.
3. What is Green ICT and how does Cloud support?
4. What are the reasons for using public cloud?
5. What are the key obstacles in Cloud Computing as per the paper published in University of California Berkley? And how do you address these obstacles?
6. What are the different security threats in Cloud Computing? How do you manage them?
7. Are the Availability and Reliability same properties in Cloud Computing? Give you view with examples.

SECTION "C"
[2Q × 8 = 16 marks]

Answer *ANY TWO* questions.

8. How virtualization can be useful in practical scenario of Cloud Computing?
9. Explain hardware architecture for Parallel Processing.
10. Develop Cloud Service Delivery Model for our University.

