

KATHMANDU UNIVERSITY  
End Semester Examination  
August, 2019

Marks scored:

Level : B.Sc.

Year : IV

Course : COMP 478

Semester: I

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date AUG 30 2019

SECTION "A"

[20Q × 0.5 = 10 marks]

Encircle the most appropriate answer.

1. IaaS stands for \_\_\_\_\_.  
a. Internet as a Service  
b. Infrastructure as a Service  
c. Interoperability as a Service  
d. Investment as a Service
2. All cloud computing applications suffer from the inherent \_\_\_\_\_ that is intrinsic in their WAN connectivity.  
a. propagation  
b. latency  
c. noise  
d. all of the mentioned
3. Which of the following is most important area of concern in cloud computing?  
a. Security  
b. Storage  
c. Scalability  
d. All of the mentioned
4. The full form of MTTF is \_\_\_\_\_  
a. Mean Time To Function  
b. Mean Time To Failure  
c. Mean Test To Fail  
d. Mean Test To Function
5. Which of the following is Type 1 Hypervisor?  
a. Wind River Simics  
b. Virtual Server 2005 R2  
c. KVM  
d. LynxSecure
6. Which of the following service provider provides the least amount of built in security?  
a. SaaS  
b. PaaS  
c. IaaS  
d. All of the mentioned
7. In \_\_\_\_\_ the virtual machine simulates hardware, so it can be independent of the underlying system hardware.  
a. paravirtualization  
b. full virtualization  
c. emulation  
d. none of the mentioned
8. MTBF stands for \_\_\_\_\_  
a. Mean Time Between Failures  
b. Median Time Between Failures  
c. Mean Time By Failures  
d. Median Time By Failures
9. Which of the following area of cloud computing is uniquely troublesome?  
a. Auditing  
b. Data Integrity  
c. e-Discovery for legal compliance  
d. All of the mentioned

10. \_\_\_\_\_ is a pay-as-you-go model matches resources to need on an ongoing basis.
  - a. Utility
  - b. Elasticity
  - c. Low barrier to entry
  - d. All of the above
11. PaaS stands for \_\_\_\_\_.
  - a. Password as a Service
  - b. Probability as a Service
  - c. Power as a Service
  - d. Platform as a Service
12. Which of the following is owned by an organization selling cloud services?
  - a. Public
  - b. Private
  - c. Community
  - d. Hybrid
13. An operating system running on a Type \_\_ VM is a full virtualization.
  - a. 1
  - b. 2
  - c. 3
  - d. 4
14. \_\_\_\_\_ model consists of the particular types of services that you can access on a cloud computing platform.
  - a. Service
  - b. Deployment
  - c. Application
  - d. Security
15. SaaS stands for \_\_\_\_\_.
  - a. Software as a Service
  - b. Secured as a Service
  - c. Security as a Service
  - d. Safety as a Service
16. Which of the following is key mechanism for protecting data?
  - a. Access Control
  - b. Auditing
  - c. Authentication
  - d. All of the mentioned
17. Which of the following is Type 2 VM?
  - a. VirtualLogix VLX
  - b. Vmware ESX
  - c. Xen
  - d. LynxSecure
18. \_\_\_\_\_ enables batch processing, which greatly speeds up high-processing applications.
  - a. Scalability
  - b. Reliability
  - c. Elasticity
  - d. Utility
19. Which of the following architectural standards is working with cloud computing industry?
  - a. Standardized Web Service
  - b. Web-application frameworks
  - b. Service Oriented Architecture
  - d. All of the mentioned
20. What is the full form of SOA?
  - a. Secure and Organized Architecture
  - b. Security Oriented Architecture
  - c. Service Oriented Architecture
  - d. Service Oriented Advantages

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SECTION "B"

[6Q × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. What do you mean by cloud computing? How is it different from Cluster Computing, and Grid Computing?
2. What do you mean by cloud computing deployment model? What is the selection criterion for private cloud deployment model?
3. How is Internet of Things related to Big Data? Discuss the advantages and disadvantages of Internet of Things.
4. Why is hypervisor important? What is its role? Discuss the different types of hypervisor.
5. What do you mean by Service Oriented Architecture? Describe in detail the quality attributes of utility service provided by Cloud Computing.
6. Explain "bathtub curve". How does it apply to hardware failure rate in cloud computing?
7. Discuss 3Vs of Big Data in detail. Discuss the applications of big data across industry sectors.

SECTION "C"

[2Q × 8 = 16 marks]

Attempt *ANY TWO* questions.

8. Discuss the PaaS, IaaS, and SaaS in detail. [2+2+2+2]
9. What is virtualization in cloud computing? Outline the characteristics of server virtualization and application virtualization.
10. Discuss, in detail, the cloud security reference model and explain how cloud security is integrated into the design of application.

