

KATHMANDU UNIVERSITY  
End Semester Examination [C]  
June, 2018

Marks scored:

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

Course : COMP 478  
Semester: I

Exam Roll No. : Time: 30 mins.

F. M. : 10

Registration No.:

Date JUN 17 2018

SECTION "A"  
[20 Q.×0.5=10 marks]

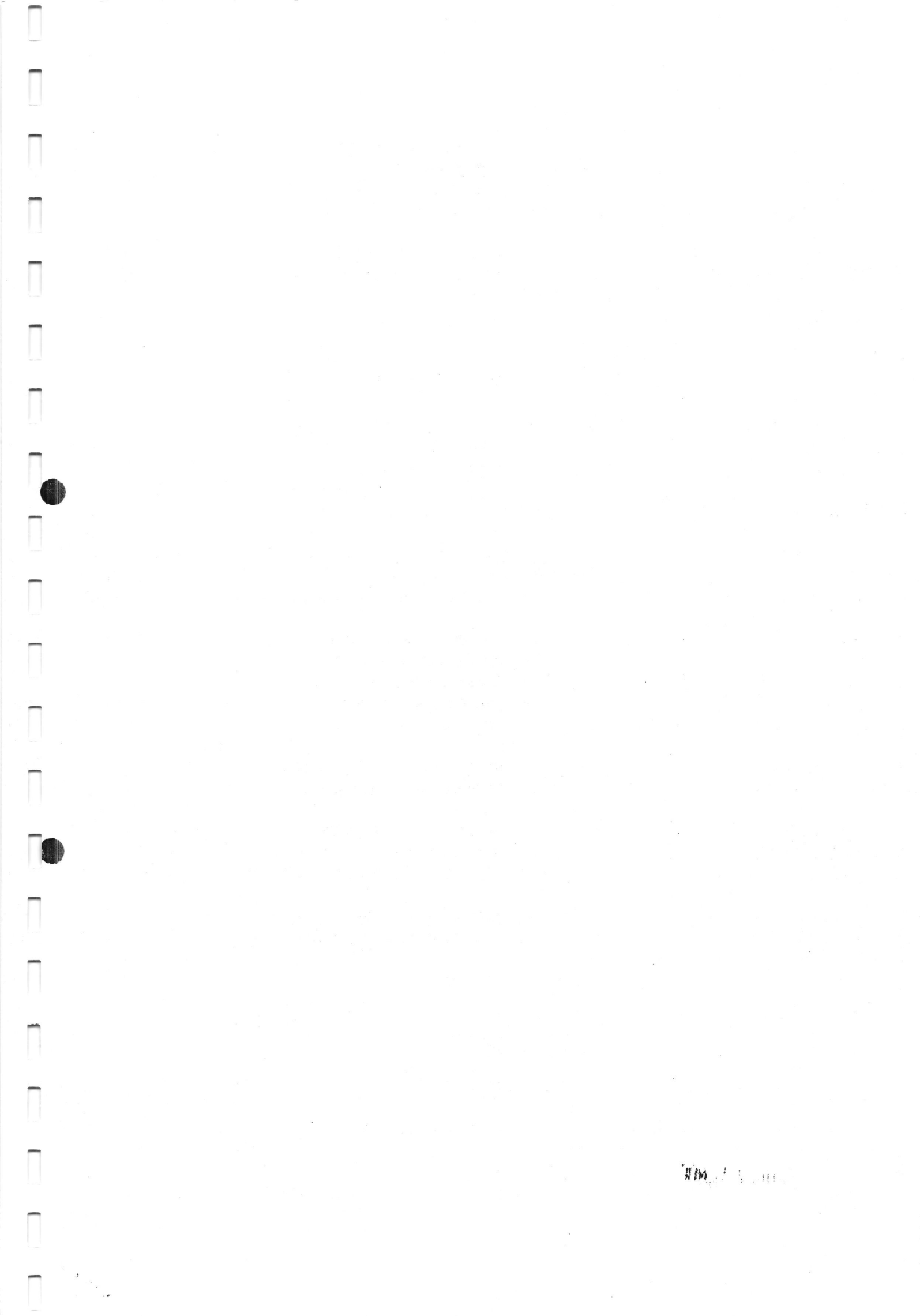
Select the best alternative.

1. Type of cloud service where setups is shared within single organization is  
[a] Internal Cloud [b] External Cloud [c] Hybrid cloud [d] Community cloud
2. What is the feature of a cloud computing that allows the service to change in size of volume in order to meet user's needs?  
[a] Scalability [b] Elasticity [c] Dynamicity [d] Virtualization
3. Virtualization layer generally consists of a software layer which is called  
[a] Virtual machine [b] Operating system [c] Hypervisor [d] System software
4. Data center clouds are formed by connecting two or more data center cloud networks over wide area network. When building such data center clouds, which component is mainly responsible for increasing the network latency?  
[a] Network interfaces [b] Network servers  
[c] Network routing protocols [d] Network clients
5. Which of the following has greater size according to operations?  
[a] Cluster computing [b] Distributed computing  
[c] Grid computing [d] Parallel computing
6. What is true about an application service provider?  
[a] It offers a computer infrastructure service.  
[b] It offers software as a service.  
[c] It offers access to the Internet.  
[d] It offers metered service to the customer.
7. What is grid computing?  
[a] It is parallel and distributed computing where computer infrastructure is offered as a service.  
[b] It is parallel computing where autonomous computers act together to perform very large tasks.  
[c] It is distributed computing where autonomous computers perform independent tasks.  
[d] It is interconnected computing where a computing platform is delivered to consumers.
8. Which resources are typically provided by an Infrastructure as a service cloud computing delivery model?  
[a] Applications [b] Middleware software stacks  
[c] Virtual private networks [d] Virtual machines

9. What is the main goal of cloud computing?  
[a] To provide ICT services with shared infrastructure and the collection of many systems  
[b] To distribute ICT services with shared infrastructure and the collection of many systems  
[c] To save ICT services with shared infrastructure and the collection of many systems  
[d] To consume ICT services with shared infrastructure and the collection of many systems
10. When selecting cloud deployment model the following factors need to be considered  
[a] Existence of company's data center  
[b] Availability of necessary IT staff skills  
[c] Sensitivity of information to be processed in cloud  
[d] Existence of wide customer base
11. Small or middle size company is developing a web based application (e.g. web shopping or social network website). It needs to test it in a condition close to real. How can it use cloud?  
[a] Deploying and running test in cloud will be limited because it is difficult to monitor application's performance remotely.  
[b] The best approach would be to run website at company's premises and generate to this site in cloud.  
[c] Deploying test environment in cloud will allow testing in condition close to real by employing a possibility to easy scale both workload and services scalability.  
[d] Using testing environment in cloud will require developers to change their business process, what may entail significant additional costs and will make using cloud not effective
12. What is an advantage of a multitenancy cloud environment over a single tenancy environment?  
[a] Higher data security  
[b] Easy to customize  
[c] Faster performance  
[d] Cost savings
13. Which statement is true about the reliability of a cloud computing solution?  
[a] A public cloud is less reliable than a private cloud.  
[b] A hybrid cloud strategy represents the best approach for a reliable cloud computing environment.  
[c] A cloud computing services can schedule a maintenance outage that affects the availability of the resources.  
[d] Cloud computing improves the reliability through the use of multiple sites.
14. Any time if there are significant spikes in cloud hosting of website can be addressed by  
[a] IAAS  
[b] PAAS  
[c] XAAS  
[d] SAAS
15. 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

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16. Point out the wrong statement.
- [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 costs.
  - [d] With SOA, clients and components can be written in different languages and can use multiple messaging protocols.
17. Advantage of public cloud over private cloud is
- [a] Less cost
  - [b] High security and privacy
  - [c] High capacity
  - [d] Compliance
18. Normal user can communicate with cloud services by:
- [a] Web interface
  - [b] APIs
  - [c] Both interface and APIs
  - [d] Web links
19. The guest software runs in their own isolated domains in
- [a] Full Virtualization
  - [b] Paravirtualization
  - [c] Emulation Virtualization
  - [d] Simulation
20. The biggest community open source cloud software is:
- [a] Cloud Stack
  - [b] Microsoft
  - [c] Google
  - [d] Openstack



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Level : B.E. / B.Sc.  
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Semester: I  
F. M. : 40

SECTION "B"

[6 Q × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. What is cloud computing? Explain the features of Cloud Computing?
2. What is Service Oriented Architecture (SOA)? Explain with the examples.
3. What are the features of IaaS? How does it differ than SaaS?
4. What is Cloud Security? What are the challenges of security in Cloud?
5. What is Markov Model? How this model can be used in Cloud Computing?
6. What are the obstacles of Cloud Computing? Explain them.
7. Compare between Community Cloud with Private Cloud.

SECTION "C"

[2 Q × 8 = 16 marks]

Attempt *ANY TWO* questions.

8. What is Virtualization? Explain the types of Virtualization with examples.
9. How does Digital Signature work? Why this is important in Cloud Computing System?
10. What is DDoS? How do you address this in Cloud Computing?

