

**CLOUD COMPUTING
(INFO 4182)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 5 (five) from Group B to E, taking at least one from each group.*

Candidates are required to give answer in their own words as far as practicable.

**Group – A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) Which category of cloud computing model does Microsoft Azure fall under?
(a) Infrastructure as a Service (b) Platform as a Service
(c) Software as a Service (d) Compliance as a Service.
- (ii) Geographic distribution of data across a cloud provider's network is perceived as a major problem for many enterprises because it
(a) adds to latency
(b) makes data recovery harder
(c) complicates regulatory compliances
(d) heightens security concerns.
- (iii) Which one of these is not a major type of cloud computing usage?
(a) Hardware as a Service (b) Platform as a Service
(c) Software as a Service (d) Infrastructure as a Service.
- (iv) Which of these should a company consider before implementing cloud computing technologies?
(a) User satisfaction (b) Potential cost reduction
(c) Information sensitivity (d) All of these.
- (v) Which of these widely used services is built on cloud-computing technology?
(a) Twitter (b) Gmail
(c) YouTube (d) All of these.
- (vi) Which service model of cloud computing provides the servers, storage devices and networks for a subscriber?
(a) Platform as a Service (b) Infrastructure as a Service
(c) Software as a Service (d) Identity as a Service.

- (vii) Which one of these solutions is not considered to be a PaaS offering?
(a) Force.com (b) Amazon EC2
(c) Microsoft Azure Services (d) All of these.
- (viii) Point out the correct combination of cloud service provider and its cloud-based solution.
(a) Intuit and QuickBooks Online (b) Google and AWS
(c) IBM and Azure (d) Microsoft and GWT.
- (ix) An internal cloud is
(a) an overhanging threat
(b) a career risk for a CIO
(c) a cloud that sits behind a corporate firewall
(d) the group of knowledge workers who use a social network for water-cooler gossip.
- (x) Which one of these is not a cloud computing pricing model?
(a) Free (b) Pay Per Use
(c) Subscription (d) Ladder.

Group – B

2. (a) Why Cloud computing is required? Explain Loosely coupled and Tightly coupled architecture.
(b) Differentiate between Grid computing and Cluster computing.
(c) What are the limitations of Cluster computing?
(2 + 5) + 3 + 2 = 12
3. (a) Discuss three main advantages and two major disadvantages of cloud computing with suitable examples.
(b) Explain different types of Grid computing.
(c) Explain briefly the benefits of Cluster computing.
5 + 4 + 3 = 12

Group – C

4. (a) With respect to the NIST Reference Model of Cloud Computing, explain the following with suitable schematic and examples:
(i) Essential Characteristics
(ii) Service Models
(iii) Deployment Models.
(b) What is virtualization?

(4 + 3 + 3) + 2 = 12

5. (a) Explain four deployment models of Cloud computing. Describe four services of AWS briefly.
(b) Explain server virtualization briefly.

(4 + 6) + 2 = 12

Group - D

6. (a) What are the advantages and disadvantages of PaaS
(b) Describe any two services of Google App Engine.
(c) Explain four services used in SOA system.
7. (a) With a suitable example explain the concept of PaaS and SaaS.
(b) What is SOAP? What are the drawbacks of SaaS?
(c) What does Google AppEngine do? Mention any one service provided by it.

3 + 3 + 6 = 12

4 + (4 + 2) + (1 + 1) = 12

Group - E

8. (a) Explain five cloud service strategies briefly.
(b) Describe the indirect cost factors of cloud.
(c) Explain cloud computing risk according to Gartner.
9. (a) Explain any five Service Transition phases of Cloud.
(b) Describe Economic Denial of Service Attacks in cloud.

5 + 4 + 3 = 12

10 + 2 = 12