

**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 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.
- (ii) What is the number one concern about cloud computing at present?
(a) Too expensive
(b) Security concerns
(c) Too many platforms
(d) Accessibility.
- (iii) Which of these widely used services is built on cloud-computing technology?
(a) Twitter
(b) Gmail
(c) YouTube
(d) All of these.
- (iv) Which deployment model of cloud computing should be used by a business group, consisting of multiple companies, for its authorized users?
(a) Community Cloud
(b) Hybrid Cloud
(c) Public Cloud
(d) Private Cloud.
- (v) Which programming language did Google include for App Engine development?
(a) C++
(b) Flash
(c) Java
(d) Visual Basic.

- (vi) 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.
- (vii) Which deployment model of cloud computing is managed by a service provider which uses an infrastructure that is off-premises, and is accessible to the general users?
- (a) Community Cloud
 - (b) Hybrid Cloud
 - (c) Private Cloud
 - (d) Public Cloud.
- (viii) 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.
- (ix) 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.
- (x) 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.

Group – B

2. (a) What is Grid computing? Explain different types of Grid computing.
- (b) Differentiate between Grid computing and Cloud computing
- (2 + 6) + 4 = 12**
3. (a) Explain the concept of Utility Computing. How Cloud and Utility computing are different?
- (b) What are the limitations of Cluster computing?
- (6 + 3) + 3 = 12**

Group – C

4. Explain four deployment models of Cloud computing. Explain Network Function Virtualization architecture briefly.
- (4 + 8) = 12**

5. (a) What is virtualization? Explain server virtualization briefly. Compare between SAN, NAS and DAS.
- (b) Briefly explain Type1 Hypervisor and type2 Hypervisor.
- (2 + 3 + 3) + 4 = 12**

Group – D

6. (a) Explain Google App Engine architecture.
- (b) Explain different component of SOA model.
- 5 + 7 = 12**
7. (a) With an suitable example explain the concept of PaaS and SaaS.
- (b) Explain any four services provided by Microsoft Azure
- 4 + (4 × 2) = 12**

Group – E

8. (a) Explain briefly the five components of Chargeback model. Describe the key activities of IT service continuity management.
- (b) Describe the indirect cost factors of cloud.
- (5 + 3) + 4 = 12**
9. (a) What are the key elements that make a compact SLA?
- (b) Explain cloud computing risk according to Gartner.
- 8 + 4 = 12**

