

**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 of the following cloud concept is related to pooling and sharing of resources?
(a) Polymorphism (b) Abstraction
(c) Virtualization (d) None of the mentioned.
- (ii) Point out the wrong statement:
(a) All applications benefit from deployment in the cloud.
(b) With cloud computing, you can start very small and become big very fast.
(c) Cloud computing is revolutionary, even if the technology it is built on is evolutionary.
(d) None of the mentioned
- (iii) Point out the correct statement :
(a) The use of the word “cloud” makes reference to the two essential concepts.
(b) Cloud computing abstracts systems by pooling and sharing resources
(c) Cloud computing is nothing more than the Internet.
(d) All of the mentioned.
- (iv) Which of the following architectural standards is working with cloud computing industry ?
(a) Web-application frameworks
(b) Standardized Web services
(c) Service-oriented architecture
(d) All of the mentioned.
- (v) The technology used to distribute service requests to resources is referred to as :
(a) load performing (b) load scheduling
(c) load balancing (d) all of the mentioned.

- (vi) Azure Storage plays the same role in Azure that ____ plays in Amazon Web Services.
(a) S3 (b) EC2 (c) EC3 (d) All of the mentioned.
- (vii) Which of the following describes a message-passing taxonomy for a component-based architecture that provides services to clients upon demand ?
(a) SOA (b) EBS (c) GEC (d) all of the mentioned.
- (viii) Cloud computing is a ____ system and it is necessarily unidirectional in nature.
(a) stateless (b) stateful
(c) reliable (d) all of the mentioned.
- (ix) Which of the following is most important area of concern in cloud computing?
(a) Security (b) Storage (c) Scalability (d) All of the mentioned.
- (x) Which of the following is an IaaS service provider ?
(a) EC1 (b) EC2 (c) EC10 (d) Hybrid

Group – B

2. (a) What is grid computing? Explain different types of grid computing
(b) Explain briefly the benefits of cluster computing. **(2 + 5) + 5 = 12**

3. (a) Why is cloud computing required? Discuss three main advantages and two major disadvantages of cloud computing with suitable examples.
(b) Explain the design issues of clustering. **(3 + 6) + 3 = 12**

Group – C

- 4.(a) What is virtualization? Explain Network Function Virtualization architecture briefly.
(b) Compare between Operating System model and Software Defined Networking model. **(2 + 8) + 2 = 12**

- 5.(a) What is IaaS? Explain the different features of Amazon EC2.
(b) Explain Open Flow Protocol with an example. **(2 + 5) + 5 = 12**

Group – D

- 6.(a) Explain Google App Engine architecture. What are the advantages and disadvantages of PaaS?
(b) Explain different compute services of Microsoft Azure **(4 + 3) + 5 = 12**

- 7.(a) What are Web Services? What are the different components used for Web Services? What are the benefits of using Web Services?
(b) Explain Microsoft Azure architecture.

(1+ 2 + 3) + 6 = 12

Group – E

- 8.(a) Explain briefly any three components of chargeback model.
(b) How should cost be allocated in a cloud?
(c) Explain distributed DOS attack.

(3 × 2) + 2 + 4 = 12

- 9.(a) What are the key elements that make a compact SLA?
(b) What are the different types of SLA provided by the cloud provider?
(c) Describe the key activities of IT service continuity management.

7 + 2 +3= 12