Note: Attempt five questions in all by selecting at least one question from each unit. All questions carry equal marks.

UNIT

- 1. (a) Differentiate cloud computing, cluster computing and grid computing with their pros and cons. 10
 - (b) Explain NIST model of cloud computing. Why we use this model in cloud computing?
- 2. (a) Define cloud computing. How to measure the cloud's value? Also tell how to measure cloud computing costs?
 - (b) Explain about the service providers of cloud computing.
 - (c) Explain the properties of cloud computing. (3×5=15)

UNIT-II

 (a) Explain in detail that how to create clouds with infrastructure as a Service.

- (b) Define software as a service (Saas). What are the Saas characteristics? Also explain how Saas and SOA are related to each other?
- (a) What is the role of networks in cloud computing?
 Explain it in brief.
 - (b) Define following terms:
 - (i) Private cloud.
 - (ii) Hybrid cloud.
 - (iii) Community cloud.

 $(3 \times 2 = 6)$

(c) Describe how to enhance the cloud computing environment using a cluster as a service?

4

UNIT-III

- 5. (a) What do you understand by SLA? Describe the types of SLA. Also explain how to manage SLA in clouds?
 8
 - (b) Describe step by step procedure to store data on the clouds. And also tell how to process large scale data on clouds?
- 6. What do you understand by microsoft's developing cloud computing strategy? What are the windows Azure hosting service? How to explore application development using the windows Azure platform? Also describe the applications that are the part of windows live.

UNIT-IV

- (a) What are the commercial consideration of cloud computing? Explain them in detail.
 - (b) How cloud data can be secured? How identity is used to allow secure cloud access?
- 8. Write short notes on following:
 - (a) Network level security.
 - (b) Application level Security.
 - (c) Cloud contracting model

 $(3 \times 5 = 15)$