

**Time: 3Hours**

**[Marks:80]**

- N.B. :** (1) Question No 1 is Compulsory.  
(2) Attempt any three questions out of the remaining five.  
(3) All questions carry equal marks.  
(4) Assume suitable data, if required, and state it clearly.

- 1 Attempt any **FOUR** [20]
- a What are the benefits of using cloud for transporting industry?
  - b Explain pros and cons of using relational and nonrelational databases in cloud.
  - c Explain cloud firewall.
  - d Differentiate between SAAS, PAAS and IAAS.
  - e Explain the benefits of virtualization.
- 2 a Explain cloud storage gateways in details. [10]
- b Explain fog and edge computing with necessary diagrams. [10]
- 3 a Explain authentication and authorization management for clouds. [10]
- b Explain database services in cloud with example from any one cloud service provider. [10]
- 4 a Explain analytics services in cloud with example from any one cloud service provider. [10]
- b Explain cloud computing application in healthcare services. [10]
- 5 a Explain the virtualization at operating system(OS) level with necessary diagrams. [10]
- b Explain model view controller with necessary diagrams. [10]
- 6 a Compare [10]
- i. Cloud computing versus peer to peer architecture.
  - ii. Cloud computing versus client-server architecture.
- b Explain content delivery services in cloud with example from any one cloud service provider. [10]