

(Time: 2 $\frac{1}{2}$ hours)

[Total Marks: 60]

- N. B.: (1) All questions are compulsory.
 (2) Make suitable assumptions wherever necessary and state the assumptions made.
 (3) Answers to the same question must be written together.
 (4) Numbers to the right indicate marks.
 (5) Draw neat labeled diagrams wherever necessary.
 (6) Use of Non-programmable calculator is allowed.

1. **Attempt any two of the following:** 12
 - a. What are the benefits of cloud computing?
 - b. List and explain types of Parallelism.
 - c. How does Virtualization work in Cloud Computing.
 - d. Define hypervisor. Explain its functionality.
2. **Attempt any two of the following:** 12
 - a. Draw and explain architecture of Cloud Computing.
 - b. Explain how IaaS works.
 - c. What is on-demand functionality? How is it provided in cloud computing?
 - d. What is Google App Engine? Explain.
3. **Attempt any two of the following:** 12
 - a. Draw and explain the mechanism of load balancer.
 - b. State the two primary types of portals that are created with the remote administration system.
 - c. Explain how digital signature works to maintain the integrity of data in cloud?
 - d. What is Pay-per-use Monitor?
4. **Attempt any two of the following:** 12
 - a. List and explain types of dynamic scaling.
 - b. Write a note on Cloud Bursting Architecture.
 - c. How can a virtual server survive the failure of its hosting hypervisor or physical server?
 - d. List out the components involved in Storage Workload Management Architecture.
5. **Attempt any two of the following:** 12
 - a. List and explain in short, the cloud delivery models.
 - b. Explain Metrics for Service Agreements.
 - c. What are the different cost metrics need to be considered by business?
 - d. List and explain types of resource clusters.