

2125  
B.E. (Computer Science and Engineering)  
Seventh Semester  
CS-705C: Cloud Computing

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. 1 (Section-A) which is compulsory and selecting two questions each from Section B-C.

x-x-x

SECTION-A

- Q1. a) What is significance of cloud computing?  
b) Can a private cloud be compatible with public cloud?  
c) What is advantage of Storage as a Service? Give examples  
d) What is the role of the Reducer in MapReduce??  
e) What are the primary dimensions of cloud security?  
f) What is VMM?  
g) Why is computation offloading needed in mobile devices?  
h) What is a mobile user offloading request?  
i) Explain how Hadoop ensures fault tolerance.  
j) What are the basic features of cloud computing platforms? 10

SECTION-B

- Q2. What is Cloud Computing? Discuss the major functional layers of cloud reference architecture (Physical Layer, Virtualization Layer, Service Layer, Orchestration Layer, and Application Layer). Explain the role of each layer with examples. 10
- Q3. Explain the concept of virtualization in detail. What is a hypervisor? Explain Type 1 and Type 2 hypervisors, their architecture, advantages, disadvantages, and real-world examples. 10
- Q4. What are the benefits and challenges of using virtual storage containers in cloud environments? How virtual storage containers are created, managed, and allocated in virtualization platforms 10

SECTION-C

- Q5. a) How Mobility is one of the key components of SMAC? 3  
b) Explain with example how Social Media data is collected, stored, processed, and analyzed using cloud-based analytics platforms 7
- Q6. Explain the architecture layers of Mobile Cloud Computing—mobile device layer, network layer, and cloud layer. Discuss the responsibilities and challenges of each layer. 10
- Q7. Explain the following:  
a) GitHub  
b) Microsoft Azure  
c) Google App Engine  
d) Amazon Web Services  
e) BigQuery 10

x-x-x