

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2025**  
**(Regular/Improvement/Supplementary)**

**COMPUTER SCIENCE**  
**FCSS3E01-VIRTUALISATION AND CLOUD COMPUTING**

**Time: 3 Hours**

**Maximum Weightage: 30**

**Section A: Short answer questions. Answer any *four* questions. Each carries *two* weightage.**

*Write short notes on:*

1. Virtualization and its importance.
2. The role of Keystone in OpenStack.
3. Eucalyptus.
4. Cloud platform management techniques.
5. Cloud computing and its any four advantages.
6. The use of iterative map reduce.
7. SaaS and any two SaaS providers.

**(4 × 2 = 8 weightage)**

**Section B: Short essay questions. Answer any *four* questions. Each carries *three* weightage.**

8. Explain the importance of CPU Virtualization.
9. Write a note on server virtualization.
10. Discuss HDFS Architecture.
11. Explain briefly the security challenges of cloud computing.
12. Compare and contrast Eucalyptus and Open Nebula cloud platforms.
13. Discuss cloud virtualization and its types.
14. Explain cloud orchestration and its tools.

**(4 × 3 = 12 weightage)**

**Section C: Essay questions. Answer any *two* questions. Each carries *five* weightage.**

15. Explain the MapReduce programming model and its significance in big data processing.
16. Discuss the security architecture design for cloud computing.
17. Explain the NIST cloud computing reference architecture.
18. Discuss in detail about cloud security challenges.

**(2 × 5 = 10 weightage)**