

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER M. TECH DEGREE EXAMINATION
Computer Science and Engineering
(Computer Science and Systems Engineering)
04 CS 6407 — Distributed Systems and Advanced Computing

Max. Marks : 60

Duration: 3 Hours

PART A

Answer All Questions

Each question carries 3 marks

1. Discuss the role of middleware in a distributed system.
2. Illustrate the steps involved in block creation and Data Replication in HDFS.
3. What are the different components of a Hadoop Node?
4. Distinguish between block and split.
5. Demonstrate the use of single physical interfaces for preparing network in Dev stack.
6. Compare Iaas, Paas and SaaS with respect to composability characteristics.
7. Write short note on Image management in Open stack.
8. Justify the need of Swift in Open Stack.

PART B

Each question carries 6 marks

9. Explain the concept of Distributed Object and Method Invocation in detail.
OR
10. Distinguish between consistency and replication in distributed systems.
11. Illustrate with examples/commands various concepts involved in working of HDFS.
OR
12. With suitable examples determine the need for Hadoop.
13. What are the various steps involved in processing a job inside Hadoop.
OR
14. Write a detailed note on Hadoop Architecture and explain the working.
15. Compare the various types of cloud infrastructure. Point out the merits and demerits of the same.
OR
16. Develop an algorithm in map-reduce to sort 'n' number of files each with 'm' size

17. Explain the concepts associated with using Infrastructure as Service.

OR

18. Explain Open stack deployment with Dev stack.

19. Name the compute service project of Open stack. Justify the importance of it in Open stack.

OR

20. Demonstrate the creation of various networks with neutron.