APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIRST SEMESTER M. TECH DEGREE EXAMINATION **D**

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. Explain the role of TP monitor in a transaction processing system with suitable diagram.
2. Identify the drawbacks of HDFS.
3. Identify the component responsible for job scheduling and which is the default job scheduler used in hadoop.
4. Write a map reduce algorithm for counting the number of occurrences of each word in an input file.
5. Describe Infrastructure as a Service with suitable diagram.
6. Identify various advantages and disadvantages of cloud computing.
7. Examine the use of Open Stack Glance.
8. List out the functions and features of Open Stack Compute Infrastructure Nova.

PART B

Each question carries 6 marks

9. Analyze the importance of consistency and replication in distributed system.

OR

10. Illustrate the various system architectures.

11. Explain the role of Name node, Secondary name node and Data node in HDFS with suitable diagram.

OR

12. Examine the various needs of hadoop with example.

13. Describe Hadoop Cluster Architecture with suitable diagram.

OR

14. Design an architecture depicting the working of MapReduce with suitable example.

15. Suppose you have to process a large amount of data. Try to find out how many words in the given document is based on games/sports. Input is given below:

    "Hi, how are you"

    "We love football"

    "He is an awesome football player"

    "Merry Christmas"

    "Olympics will be held in China"

    "Records broken today in Olympics"

    "He qualified for Olympics"

    Write the Map Reduce algorithm to find the number of words related to games/sports.

OR

16. Examine the various Map Reduce output formats with suitable diagram.

17. Illustrate various types of cloud computing services in detail with diagram.

OR

18. Describe the architecture of Open Stack.

19. Demonstrate the creation of various networks with neutron.

OR

20. Explain user management with keystone in Open Stack.