Register No.: …………………………… Name: ………………………………………………………….

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FIRST SEMESTER M.TECH DEGREE EXAMINATION (Regular), FEBRUARY 2022
(COMPUTER SCIENCE & SYSTEM ENGINEERING)
(2021 Scheme)

Course Code :   **21SE103**

Course Name: **Distributed Systems and Advanced Computing**

Max. Marks :   **60**   **Duration: 3 Hours**

PART A
(Answer all questions. Each question carries 3 marks)

1. Compare grid computing and cluster computing.
2. What are the major uses of Hadoop?
3. Compare and contrast HDFS and RDBMS.
4. What is meant by a record in MapReduce?
5. Illustrate the relation between various Openstack components with the help of a diagram.
6. Describe about SaaS.
7. Illustrate the keystone interaction between various components with a diagram.
8. Describe about Openstack Heat.

PART B
(Answer one full question from each module, each question carries 6 marks)

MODULE I

9. Explain the use of multi layered architecture in an Internet search engine.   (6)

OR

10. Explain the application of chord system with an example.   (6)

MODULE II

11. Explain the anatomy of a Hadoop cluster.   (6)

OR

12. Describe the various motivational factors that led to the development of Hadoop.   (6)

MODULE III

13. Demonstrate the map and reduce steps in a MapReduce application with an example.   (6)

OR

14. Write the pseudo code of a MapReduce application to find the largest number from a given input set.   (6)

MODULE IV

15. Explain the relevance of Split size and show with an example how mapper count and split size are related. (6)

OR

16. Evaluate the merits and demerits of an academic institution going to implement all programming experiments using a private cloud. (6)

MODULE V

17. "Openstack is a Cloud Operating System ". Evaluate the statement. (6)

OR

18. Differentiate between the various cloud computing architectures. (6)

MODULE VI

19. Explain Openstack solution for networking as a service. (6)

OR

20. Explain about Openstack glance. (6)

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