

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

**SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)**

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**FIRST SEMESTER M.TECH DEGREE EXAMINATION (Regular), DECEMBER 2023****COMPUTER SCIENCE AND SYSTEMS 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. What is distributed object?
2. List out the uses of Hadoop.
3. Write notes on data node and name node.
4. Determine the characteristics that define cloud data, infrastructure and application services.
5. What are the application areas of Devstack?
6. Define Open Stack. List out the components of Open Stack.
7. Elucidate the concept of Neutron.
8. Describe keystone.

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

9. Explain the different Distributed Computing Systems. (6)

**OR**

10. Summarize the centralized architectures. (6)

**MODULE II**

11. Discuss the Hadoop Eco-System in detail. (6)

**OR**

12. Explain the following HDFS concepts: (6)
- i) HDFS Availability
  - ii) HDFS Federation
  - iii) HDFS Block caching

**MODULE III**

13. Illustrate Hadoop Cluster architecture (6)

**OR**

14. Write a pseudo-code to find word count using MapReduce and illustrate with an example. (6)

**MODULE IV**

15. Describe any three cloud deployment models (6)

**OR**

16. Explain key value input file format and XML file format (6)

**MODULE V**

17. Write notes on Infrastructure as a Service. (6)

**OR**

18. Write notes on Software as a Service. (6)

**MODULE VI**

19. Discuss the steps for installation of OpenStack Nova. (6)

**OR**

20. Summarize the features of Open Stack Networking (6)

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