

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION (S), FEBRUARY 2024**COMPUTER SCIENCE AND ENGINEERING****(2020 SCHEME)****Course Code : 20CST421****Course Name: Cloud Computing****Max. Marks : 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Define XaaS.
2. Mention the cloud model suitable for a hospital data management system which demands maximum protection for data.
3. Define network virtualization.
4. What do you mean by XaaS Cloud delivery model?
5. An organization with scalable nature of resources want to pool its resources in a cloud environment; In open-source platform such as Open stack or cloud stack which one you will suggest for the same? Why?
6. Describe the significance of MapReduce in HDFS in a Hadoop Architecture.
7. Mention major VM security challenges.
8. Explain the role of Identity and Access management in cloud security.
9. Expand the abbreviation EC2 in Amazon EC2 and mention the major applications of this product.
10. What is AWS Lambda?.

PART B***(Answer one full question from each module, each question carries 14 marks)*****MODULE I**

11. a) Define cloud computing with NIST refence model. Mention the characteristics, benefits and challenges of cloud computing (8)
- b) Enlist and explain major cloud deployment models. (6)

OR

12. a) Why a cloud model is described as a "pay as to go" model ? Compare and contrast IaaS, PaaS and SaaS. (8)
- b) Write short notes on i) grid computing ii) cluster computing iii) distributed computing. (6)

MODULE II

13. a) Why Virtualization Technology is called the backbone of cloud environment implementation. Explain various virtualization (8)

techniques with suitable diagrams.

- b) Explain in detail about different type of hypervisors. (6)

OR

14. a) What is Xen? Discuss its elements for virtualization (8)
b) What are the major pros and cons of virtualization. (6)

MODULE III

15. a) What are the major functions of MapReduce framework? Explain a map reduce function with an example (8)
b) What are the major resources provisioning techniques in cloud computing? (6)

OR

16. a) Write a Hadoop program to count total number of alpha numeric characters in a file (8)
b) Explain the working of Eucalyptus platform with diagram. (6)

MODULE IV

17. a) What are Threat agents? Describe different types of threat agents. (8)
b) Explain in detail the OS security implementation in Cloud computing. (6)

OR

18. a) What are the major security threats and vulnerabilities in cloud environments? (8)
b) What are the mechanisms for network level security implementation in cloud environment? (6)

MODULE V

19. a) What is PaaS? Describe the implementation of Google App Engine (8)
b) Describe about the Amazon CDN services. (6)

OR

20. a) Describe the Amazon Azure Architecture in detail. (8)
b) Explain the IaaS platform of Google in detail. (6)
