

Hall Ticket Number:

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Code No. : 41511

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (I.T.) IV Year I-Semester Main Examinations, December-2017

Distributed and Cloud Computing

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. List the challenges of distributed systems?
2. Distinguish between clock skew and clock drift.
3. Illustrate with a diagram the concept of consistency cut in the context of a global state.
4. Demonstrate the concept of active replication with a diagram.
5. Compare cluster, grid and cloud computing.
6. State the need for resource pooling in cloud.
7. Distinguish between Type-I and Type-II hypervisors.
8. State the benefits of virtualization.
9. Define Data Center. Give an example.
10. Recommend a scenario where a community cloud can be used instead of a private cloud.

Part-B (5 × 10 = 50 Marks)

11. a) Compare and contrast between NOS, DOS and Middleware. [5]
b) List and explain various forms of transparency in distributed system. [5]
12. a) Distinguish between centralized and distributed mutual exclusion algorithms. [5]
b) Classify different types of failures in a distributed system. Also provide examples. [5]
13. a) Illustrate with a diagram the architecture of a cloud with respect to its essential characteristics, service models and deployment models [6]
b) State the pros and cons of cloud computing. [4]
14. a) Illustrate the architecture of Xen along with its features. [7]
b) Recommend three scenarios where you can use virtualization effectively. [3]
15. a) Compare POP, IMAP and SMTP in the context of messaging standards in cloud. [5]
b) Illustrate the cooling mechanism used in Data Centers. [5]
16. a) What is the reason for using bully algorithm. Also illustrate the concept of bully algorithm with an example. [6]
b) Explain about quorum based protocol in replication. [4]
17. Answer any *two* of the following:
 - a) Distinguish between IaaS and PaaS. [5]
 - b) State the importance of virtualization in cloud. Also list any three virtualization software along with their vendors. [5]
 - c) Explain about the features of AWS. [5]

