

**R18**

**Code No: 156ER**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year II Semester Examinations, July - 2023**

**CLOUD COMPUTING AND VIRTUALIZATION**

**(Computer science and Engineering - IOT)**

**Time: 3 Hours**

**Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.  
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.  
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A**

**(25 Marks)**

- 1.a) What is parallel computing? [2]  
b) Explain the need of virtual machine. [3]  
c) What is Cloud Computing? [2]  
d) Write a short note on 'integration as a Service' in cloud. [3]  
e) What is T Systems? [2]  
f) Discuss about Platform As a Service in Cloud. [3]  
g) Explain the concept of Virtualization. [2]  
h) Differentiate between Full Virtualization and Para Virtualization. [3]  
i) What is Cloud Migration? [2]  
j) Explain the use of Hardware Virtualization. [3]

**PART – B**

**(50 Marks)**

2. Discuss in detail about Distributed System Models. [10]  
**OR**  
3.a) Explain in detail about Virtualization of Clusters.  
b) Describe the Data Model for Virtual Machine. [5+5]  
4.a) Give an Overview of Enterprise Cloud Computing Paradigm.  
b) Explain the Seven Step Model of Migration into a Cloud. [5+5]  
**OR**  
5.a) Describe the features, challenges and risks in cloud computing.  
b) Explain about Integration as a Service paradigm for the Cloud Era. [5+5]  
6.a) What is Software-as-a-Service (SaaS)? Explain the characteristics of SaaS.  
b) Summarize advantages and disadvantages of IaaS. [5+5]  
**OR**  
7.a) Explain the concept of Workflow Engine for Clouds.  
b) With neat sketch, explain Comet Cloud Architecture. [5+5]

- 8.a) Describe in detail about Hardware Assisted Virtualization.  
b) Discuss in detail about Para Virtualization. [5+5]

**OR**

- 9.a) Distinguish between Hardware Assisted Virtualization and Hardware Virtualization.  
b) Describe the use of Hypervisor. [5+5]

- 10.a) What is an Operating System Virtualization? How does it works?  
b) Discuss in detail about Network Function Virtualization. [5+5]

**OR**

- 11.a) Describe in detail about Application Virtualization.  
b) Explain in detail about Memory Virtualization. [5+5]

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Use of Paper July/Aug-2023