CBCS SCHEME

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18SCS23

Second Semester M.Tech. Degree Examination, June/July 2019
Cloud Computing

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. With a neat diagram, explain the structure of the 3 delivery models and different types of cloud. **(10 Marks)**

b. Write short notes on the following :
i) Cloud Vulnerabilities ii) Ethical issues in Cloud Computing. **(10 Marks)**

OR

2 a. Explain the different types of Service offered by AWS which are accessed through AWS Management Console. **(10 Marks)**

b. Explain the different Open – Source platforms for Private Cloud. **(05 Marks)**

c. Explain the use of energy use and Ecological impact of large scale data centre. **(05 Marks)**

Module-2

3 a. List and explain the different challenges in Cloud Computing. **(06 Marks)**

b. What is a Workflow? Explain the life cycle of the workflow. **(08 Marks)**

c. With neat sketch, explain in detail the Zookeeper Co-ordination Service. **(06 Marks)**

OR

4 a. With neat diagram, explain in detail the Map Reduce Programming model. **(08 Marks)**

b. What are the different high performance computing that can be performed on the cloud? **(06 Marks)**

c. With neat diagram, explain the execution of loosely coupled workloads using the Azure platform. **(06 Marks)**

Module-3

5 a. What is Virtualization? Explain what is hypervisor and its features with steps to show how it virtualizes CPU and memory. **(08 Marks)**

b. Differentiate between Full Virtualization and Para Virtualization. **(06 Marks)**

c. Explain with neat diagram, the different types of hypervisor and consideration to be taken while executing privileged and unprivileged instructions. **(08 Marks)**

OR

6 a. Explain the Case study of XEN hypervisor with suitable diagrams. **(10 Marks)**

b. Briefly explain the darker side of virtualization. **(05 Marks)**

c. Briefly explain how virtualization is done for X86 Architecture. **(05 Marks)**

Module-4

7 a. List and explain the different policies for Cloud Resource Management. **(06 Marks)**

b. Explain with a neat sketch a 2 – level Allocation Architecture based on control theory for cloud. **(08 Marks)**

c. Explain in detail the pricing and Allocation Algorithm. **(06 Marks)**

OR

8 a. Using start – time fair queing Scheduling Algorithm to compute the virtual start – up and the virtual finish time for 2 threads a and b with weight $W_a = 1$ and $W_b = 5$. When the time quantum is q = 15 and thread b blocks at time t = 24 and wakes up at time t = 60. Plot the virtual time of the scheduler function of the real time. **(12 Marks)**

b. Explain how the Resource is managed and Application is scaled dynamically in Cloud. **(08 Marks)**

Module-5

9 a. With neat diagram, explain the different surface of Attacks in Cloud Computing Environment. **(10 Marks)**

b. Explain the different Security risks faced by Cloud Users. **(10 Marks)**

OR

10 a. Write a note on Service for Adaptive data streaming and Cloud based optimal FPGA synthesis. **(10 Marks)**

b. With neat diagram, explain the Virtual Security Services provided by VMM and dedicated security VM. **(10 Marks)**

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