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18CS643

Sixth Semester B.E. Degree Examination, June/July 2023
Cloud Computing and Its Applications

Time: 3 hrs.

Max. Marks: 100

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

Module-1

1 a. Define cloud computing. Explain its characteristics and benefits. (06 Marks)
   b. List and explain pro's and con's of virtualization. (06 Marks)
   c. Explain the following :
      i) Amazon web services
      ii) Microsoft Azure. (08 Marks)

OR

2 a. Explain with neat diagram, Type – I and Type – II hypervisor. (06 Marks)
   b. List and explain the different various cloud competing platforms and technologies. (06 Marks)
   c. With the help of neat diagram, explain the cloud computing reference model. (08 Marks)

Module-2

3 a. What is Iaas? Explain its reference implementation with neat diagram. (10 Marks)
   b. Explain hardware and software stack of private cloud. List any 2 advantages of using private cloud interface. (10 Marks)

OR

4 a. Explain the different services located in the Aneka Container. (10 Marks)
   b. Explain with the neat diagram, logical organization of the Aneka cloud. (10 Marks)

Module-3

5 a. What are the two major technique used to define parallel implantation of computer algorithm? Explain. (06 Marks)
   b. Describe how to implement a parallel matrix scalar product by using domain decomposition. (06 Marks)
   c. Define thread? Explain the relation between process and thread with suitable diagram. (08 Marks)

OR

6 a. Explain Aneka thread application model with simple Application. (08 Marks)
   b. Define task. Explain the computing categories that relate to task. (06 Marks)
   c. Explain MPI program structure with neat diagram. (06 Marks)

Module-4

7 a. What is data intensive computing? What are the open challenges in the data intensive computing? (06 Marks)
   b. Discuss the features of Google file system and Amazon Simple Storage Service (S3). (06 Marks)
   c. Explain with a reference scenario, the characteristics and applications of data grid. (08 Marks)

OR

8   a.   What does the term NOSQL mean? Explain Google bigtable with its architecture. **(06 Marks)**
     b.   Explain Mapreduce execution Service of Aneka with a neat diagram. **(06 Marks)**
     c.   Explain the following Mapreduce similar framework.
           i) Pig   ii) Hive   iii) Hadoop. **(08 Marks)**

Module-5

9   a.   Explain the various storage and communication services provided by AWS. **(08 Marks)**
     b.   With a neat diagram, explain the Google AppEngine platform architecture. **(06 Marks)**
     c.   Establish the relationship on how the cloud computing technology can be applied to support ECG monitoring. **(06 Marks)**

OR

10   a.   With a detailed inference, explain the CRM and ERP implantation based on cloud computing technologies. **(08 Marks)**
     b.   Demonstrate with a neat sketch, the architecture of Windows Azure. **(06 Marks)**
     c.   Describe an application of cloud technologies for online gaming. **(06 Marks)**

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