# CBCS SCHEME

**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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