Code No: **RT42043E** **R13** **Set No. 1**

IV B.Tech II Semester Regular Examinations, April/May - 2017

CLOUD COMPUTING

(Common to Electronics & Communication Engineering and Computer Science & Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B

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PART–A *(22 Marks)*

1. a) What is message passing interface? [3]
   b) Discuss binary translation in Virtualization? [4]
   c) Define cloud computing? List out characteristics of cloud computing? [3]
   d) List out system issues for running typical parallel program in cloud data centers? [4]
   e) Explain the Policies and Mechanisms for resource management in cloud data centers? [4]
   f) Define ACID properties of transaction management? [4]

PART–B *(3x16 = 48 Marks)*

2. a) Discuss HPC and HTC. [6]
   b) Discuss performance Metrics and Scalability Analysis for virtual Machines. [10]

3. a) Explain Implementation levels of virtualizations. [8]
   b) Give VMM design requirements and explain. [8]

4. a) State and explain service models of cloud computing with architectures? [10]
   b) Define cloud computing? Explain different types of clouds available. [6]

5. a) Differentiate between piglatin, sawzall & DrayadLINQ. [8]
   b) Explain SQL Azure & Azure tables? [8]

6. a) Discuss about fair queue scheduling algorithm? [8]
   b) What is the role of power managers in cloud resource scheduling and management? Explain briefly. [8]

7. a) List and explain various storage models of file systems and data base? [8]
   b) What is Amazon S3? Explain in detail. [8]

Code No: **RT42043E** **R13** **Set No. 2**

IV B.Tech II Semester Regular Examinations, April/May - 2017

CLOUD COMPUTING

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Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
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PART–A *(22 Marks)*

1. a) What is Hypervisor? List out some examples? [4]
   b) What are the steps involved in live VM migration? [4]
   c) Illustrate cloud design objectives? [4]
   d) What is HDFS? Name two layers in HDFS? [3]
   e) What is the role of mapper and reducer in Hadoop platform? [3]
   f) Discuss the use of NoSQL Database? [4]

PART–B *(3x16 = 48 Marks)*

2. a) Explain GPU Computing, Exascale & beyond. [8]
   b) Discuss briefly Massive Parallel Processors. [8]

3. a) What is VMM? Explain XEN Architecture? [8]
   b) Define full Virtualization? Draw a neat sketch of Para Virtualization Architecture and explain. [8]

4. a) List out architecture design challenges of compute & storage Clouds? Discuss them in brief. [8]
   b) Draw a neat sketch of Google cloud platform and explain? [8]

5. a) Explain Google file systems. [8]
   b) Explain Amazon Elastic Block Structure (EBS) & Simple DB? [8]

6. a) Discuss the various deadlines with respect to cloud scheduling? [8]
   b) What is resource bundling? Explain combinational auctions? [8]

7. a) Explain mega store architecture with example? [10]
   b) What is Bigtable? How it is related to GFS? [6]

Code No: **RT42043E** **R13** **Set No. 3**

IV B.Tech II Semester Regular Examinations, April/May - 2017

CLOUD COMPUTING

(Common to Electronics & Communication Engineering and Computer Science & Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
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PART–A *(22 Marks)*

1. a) Explain SOA with its applications? [4]
   b) Compare physical versus virtual clusters? [4]
   c) What is IaaS? Mention any two IaaS service providers? [4]
   d) Discuss Bigtable? [3]
   e) Define control theory? Discuss the use of control theory in cloud resource management. [3]
   f) List out the functionalities of AmazonS3? [4]

PART–B *(3x16 = 48 Marks)*

2. a) Illustrate the degrees of parallelisms. [8]
   b) Explain the design goals of HPC & HTC. [8]

3. a) What is Memory virtualization? Explain two level memory mapping procedure? [8]
   b) Explain implementation levels of virtualization briefly? [8]

4. a) Draw and explain Amazon cloud computing infrastructure? [8]
   b) List five public cloud offerings of PaaS? [8]

5. a) Explain Google Map Reduce frame work architecture with example? [10]
   b) What is DryadLINQ? Explain briefly? [6]

6. a) Discuss briefly borrowed virtual time (BVT)? [8]
   b) What is utility computing? Explain utility model for cloud web services? [8]

7. a) Explain in detail general parallel file system? [10]
   b) How megastore is associated with Bigtable? Explain. [6]

Code No: **RT42043E** **R13** **Set No. 4**

IV B.Tech II Semester Regular Examinations, April/May - 2017

CLOUD COMPUTING

(Common to Electronics & Communication Engineering and Computer Science & Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
*****

PART–A *(22 Marks)*

1. a) Define parallel computing. [4]
   b) What is KVM? Explain? [3]
   c) How does cloud computing provides on demand functionality? [4]
   d) List out the features of Amazon S3? [3]
   e) Draw two level architecture of resource allocation in cloud? [4]
   f) What is Chubby? How it is useful to cloud? [4]

PART–B *(3x16 = 48 Marks)*

2. a) Explain different computing paradigms. [8]
   b) Discuss in detail different system models for distributed and cloud computing? [8]

3. a) What is the need of live VM Migration steps and performance effects? [8]
   b) (i) Does VMM acts as an interface in virtualization? Justify
   (ii) What is the rate of domain ‘O’ is XEN architecture? [8]

4. a) Draw and explain Microsoft Windows Azure? [8]
   b) List five public cloud offerings of IaaS? [8]

5. a) What is HDFS? Explain job management in HDFS with Architecture? [10]
   b) How the piglatin is helpful to Hadoop Architecture? Explain. [6]

6. a) With a neat sketch explain Stability of a two-level resource allocation architecture. [8]
   b) With an example explain start time fair queuing algorithm? [8]

7. a) Explain the architecture of GFS clustering? [10]
   b) Write a short note on AmazonS3? [6]