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**BTECH**  
**(SEM VII) THEORY EXAMINATION 2023-24**  
**CLOUD COMPUTING**

**TIME: 3 HRS****M.MARKS: 70****Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 7 = 14**

a.	List the essential characteristics of Cloud Computing.
b.	Define the term 'Elasticity'.
c.	Explain Hybrid Cloud.
d.	Define virtual machine in cloud computing.
e.	List the major challenges faced in cloud environment.
f.	Define security governance in cloud environment.
g.	List the levels of federation.

**SECTION B****2. Attempt any three of the following:****7 x 3 = 21**

a.	Discuss Evolution of Cloud computing.
b.	List and explain the steps to ensure security of virtual machines in cloud computing environment.
c.	Describe Cloud deployment models with neat diagrams.
d.	Explain cloud security challenges. Also explain how security is provided to data at various stages in context of cloud.
e.	Explain Hadoop and its history. Also illustrate Hadoop architecture.

**SECTION C****3. Attempt any one part of the following:****7 x 1 = 7**

(a)	Describe Elasticity and also explain working of Amazon Elastic Compute Cloud (EC2).
(b)	Define the need of cloud computing and explain its evolution with suitable diagram.

**4. Attempt any one part of the following:****7 x 1 = 7**

(a)	Describe in detail about the REST, a software architecture style for distributed systems.
(b)	Describe the different techniques used for implementation of Hardware virtualization. Explain them with diagram.

**5. Attempt any one part of the following:****7 x 1 = 7**

(a)	Define cloud storage. Also describe types of cloud storage.
(b)	Explain in detail about cloud service models available in cloud computing environment.

**6. Attempt any one part of the following:****7 x 1 = 7**

(a)	Discuss cloud security governance. Explain key objectives and challenges of cloud security governance.
(b)	Explain inter cloud resource management in cloud computing.

**7. Attempt any one part of the following:****7 x 1 = 7**

(a)	Define Open Stack. Also discuss its components and architecture.
(b)	Write short notes on any two of the followings: <ol style="list-style-type: none"> <li>Virtual Box</li> <li>MapReduce</li> <li>Google App Engine</li> </ol>