[5254]-180

B.E. (Computer Engineering)
CLOUD COMPUTING
(2008 Pattern) (Elective - IV)

Time : 3 Hours]   *[Max. Marks : 100*

Instructions to the candidates:
   1)   Answer THREE questions from each section.
   2)   Answers to the TWO sections should be written in SEPARATE answer books.
   3)   Figures to the right indicate full marks.
   4)   Draw neat diagram wherever necessary.
   5)   Make suitable assumptions wherever necessary.

SECTION - I

Q1) a)   What is On Demand Service? Describe in detail essential characteristics
           of cloud computing.   **[8]**

       b)   Draw and explain NIST defined cloud framework.   **[8]**

       c)   Define resource pooling in cloud computing.   **[2]**

                                     OR

Q2) a)   Describe 4 types of Cloud computing deployment platforms each with
           examples.   **[8]**

       b)   Explain the services provided by the Microsoft Azure.   **[8]**

       c)   Define Utility Computing.   **[2]**

Q3) a)   What is necessity of Hypervisors ? Describe role of hypervisor for
           deployment web services.   **[8]**

       b)   How AJAX application works? Explain the significant processing steps
           of asynchronous 'rich' interfaces application.   **[8]**

                                     OR

Q4) a)   Describe the term 'Virtualization'. Discuss pitfalls of virtualization.
           Contrast between traditional server concept and virtual server concept.**[8]**

       b)   Explain how virtual machine technology enables decoupling physical
           hardware from virtual machine. What are the determination of virtual
           machine migrations.   **[8]**

Q5) a) Explain in detail the relational operation and enterprise batch processing using Map Reduce in Cloud File. **[8]**

b) How Amazon dynamo works for data storage across distributed file systems? **[8]**

<div align="center">OR</div>

Q6) a) Explain with suitable example how a batch processing could be executed in parallel using Mapreduce. **[8]**

b) How big tables are stored on distributed file systems such as HDFS and Cloud file system? **[8]**

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SECTION - II

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Q7) a) Explain in detail security management in cloud system . Describe the following terms: **[10]**

    i) VPN Tunneling

    ii) VM Security

    iii) Virtual Threats

b) Write in brief threats and vulnerability specific security management.**[8]**

<div align="center">OR</div>

Q8) a) Explain in detail Identity and Access Management security in cloud environment. Discuss risks from multitenancy with respect to various cloud environments **[10]**

b) Describe in detail VM security recommendations and VM specific security techniques. **[8]**

Q9) a) Describe intercloud environment and QoS issues in cloud computing.**[8]**

b) Describe in detail streaming in Cloud for QoS monitoring deployed in cloud computing? **[8]**

<div align="center">OR</div>

*Q10)*a) Explain in detail load distribution across multiple implementation. Describe in brief virtual and horizontal load distribution. **[8]**

b) Explain in detail how Dependability, data migration in cloud computing environment. **[8]**

*Q11)*a)   Explain representation of Ecucalyptus with its components.   **[8]**

b)   Explain XEN cloud platform with suitable platform.   **[8]**

OR

*Q12)*a)   Explain in details Open Nebula cloud with its components.   **[8]**

b)   What is Nimbus? Explain the steps of Nimbus infrastructure.   **[8]**

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