

Total No. of Questions : 12]

SEAT No. :

P3426

[4959]-201

[Total No. of Pages : 3

B.E. (Computer Engineering)

c:CLOUD COMPUTING

(2008 Pattern) (Semester - II) (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) Explain the types of cloud. contrast between traditional network and cloud computing. **[8]**
- b) What are the essential characteristics of cloud? How cloud computing services uses various component? **[8]**
- c) What is Utility computing? **[2]**

OR

- Q2)** a) Describe Cloud computing. Enlist and explain three services model and four deployment models of cloud computing. **[8]**
- b) Explain the services provided by the Microsoft Azure in terms of subscriber perspectives. **[8]**
- c) Define Elastic Computing. **[2]**

- Q3)** a) What is virtualization? Describe types of virtualization. Enlist and explain some of the common pitfalls that come with virtualization. **[8]**
- b) Compare SOAP and REST paradigm in the context of programmatic communication between applications deployed on different cloud providers. **[8]**

OR

P.T.O.

Q4) a) What is the fundamental differences between virtual machines as perceived by traditional operating systems and system VM? [8]

b) What is role of web services? How asynchronous 'rich' interfaces applied for deployment of cloud services? [8]

Q5) a) Explain in detail the role of map Reduce in Cloud File System with its parallel efficiency. How Google develop data storage using BigTable?[8]

b) Explain how big tables are stored on distributed file system such as GFS and HDFS. [8]

OR

Q6) a) Explain with suitable example how a relational join could be executed in parallel using Mapreduce. [8]

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

SECTION - II

Q7) a) Explain in detail security management in cloud system. Describe the following terms: [9]

i) VPN Tunneling ii) VM Security iii) Virtual Threats

b) Write in brief cloud risk issues. [9]

OR

Q8) a) Explain risks from multitennancy, w.r.t. various cloud environment. [9]

b) Explain fundamental functions: identity management, access control for secure cloud computing. [9]

- Q9)** a) Explain the issues in cloud computing w.r.t. implementing real time application over cloud platform. [8]
- b) Describe in detail design issues of QoS - aware distributed architecture for cloud. [8]

OR

- Q10)**a) Compare different issues in inter-cloud environments. [8]
- b) Explain in detail how QoS monitoring deployed in cloud computing? [8]

- Q11)**a) Explain in detail performance evaluation feature of Xen cloud platform with block diagram. [8]
- b) What is Open Nebula cloud? Explain main components of Open Nebula. [8]

OR

- Q12)**a) Explain conceptual representation of Eucalyptus Cloud with its components. [8]
- b) Write a short note on [8]
- i) Apache Virtual Computing Lab
- ii) Nimbus

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