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Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



II SEMESTER M.TECH.(CSE & CSIS) END SEM EXAMINATIONS, MAY 2016

SUBJECT: CLOUD COMPUTING ELECTIVE 1 (CSE 586)

REVISED CREDIT SYSTEM

DATE: 10-05-2016

TIME: 3 HOURS

MAX.MARKS: 50

Instructions to Candidates

- ❖ Answer **ANY FIVE FULL** questions.
- ❖ Missing data, if any, may be suitably assumed.

1A.Explain different cloud deployment models.

1B.With a neat diagram explain virtual machine life cycle.

1C.A company delivers Software as a Service that allows users to fill out and submit tax forms online. Explain what should the company do to accommodate the spike in demand on the date when the tax forms are due? (5+3+2)

2A.With a time line diagram explain virtual machine migration.

2B. Explain usefulness of following issues with respect to SDN

i) Separation of control and data plane ii) programmability of control plane. (5+5)

3A.With a diagram explain the life cycle of Aneka Remote thread life cycle.

3B. Explain the different operations provided to control the task execution in the Aneka task programming model.

3C. A company is looking for a provider who offers a set of basic services such as virtual server provisioning and on demand storage that can be combined into a platform for deploying and running customized applications. Explain what type of cloud computing model fits these requirements? (5+3+2)

4A. With a diagram explain the HDFS architecture.

4B. Describe the role of scheduling and execution services that constitute the runtime infrastructure supporting Aneka Mapreduce model.

4C. Give a map reduce programming structure to count the access frequency of a particular link in the given web log. **(5+3+2)**

5A. Explain the following SOA characteristics.

- i) Interoperability ii) Scalability iii) Reusability

5B. Explain the role of SOAP, WSDL and UDDI in the web service development. **(5+5)**

6A. Explain following issues with respect to cloud security

- i) Identity management ii) Lack of Trust

6B. With a diagram explain the working of elastic manager which maintains the application elasticity.

6C. A company operates data centers in two different regions. Energy costs for one of the data centers increases during the warmer, summer months. The company already uses server virtualization techniques in order to consolidate the total number of required resources. How might the company further reduce operating costs at this data center?

(4+4+2)