Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY, MANIPAL 576104

(Constituent College of Manipal University)

SIXTH SEMESTER B.TECH (CCE) DEGREE - END SEMESTER EXAMINATION MAY – 2016
SUBJECT: CLOUD COMPUTING – ICT 365
(REVISED CREDIT SYSTEM)

TIME: 3 HOURS **13/05/2016** **MAX. MARKS: 50**

Instructions to candidates
- Answer any **FIVE FULL** questions.
- Missing data, if any, may be suitably assumed.

1A. Client XYZ has been given a project to Jeevan, in which he has to create a web service for library management system. The service supports a single operation called GetBookDetails, which is deployed using the SOAP 1.1 protocol over HTTP. The request takes an Author ID of type string, and returns the Book details (book_name, cost, publications). He wants the user to access this web service with the url http://www.examples.com/book_details/.Write the complete WSDL for his requirement.

1B. List and explain two different types of VM migration process.

1C. Distinguish between VM replication and VM Backup? Explain with scenario with neat diagram.

(5+3+2)

2A. Demonstrate the network connectivity and traffic flow in the virtual environment when a physical server uses only HBA to connect client and FC/iSCSi storage array, with diagram list each components in the VDC environment.

2B. Explain the following with suitable examples

I. Orchestration
II. Remote Desktop Services
III. Enterprise Service Bus

2C. The cost of designing, building and testing the API for the "Weather Forecasting" service is Rs. 30000/-. The cost of downtime is Rs. 500/- per month, the cost of on-going maintenance is Rs. 2000/- per month and the cost of data subscription is Rs. 1000/- per month. The onetime cost of Web API is Rs. 2000/- and on-going cost of Web API Rs. 900/-. Find the savings of "Weather Forecasting" service for one-time cost and on-going cost.

(5+3+2)

3A. An Enterprise XYZ has a full-fledged application related to Health Care which is developed in COBOL (legacy application). It contains critical and non-critical data and they make use of proprietary software for supporting their application. Explain the key points to consider while migrating an application to the cloud and explain each phase with examples.

3B. Explain security threats in VDC and Cloud environment from Cloud service Providers and users perspective.

3C. List security mechanisms at compute level. Explain any one technique in details.

(5+3+2)

4A. What are the technological foundations of cloud computing. Explain the steps involved in transition from Classic Datacentre to Cloud Environment.

4B. Give the six characteristics of Software as a Service Delivery model with neat diagram.

4C. Explain two methods for adding more resources to an application with diagram.

(5+3+2)

5A. KMC Hospital is managing 50 physical servers with over 100 TB of critical patient data in the storage. As a strategic move KMC has planned to adopt to virtualization technology in their data centre which enable them to share their workload on over 500 virtual servers. KMC has planned to use Business continuity strategy to eliminate Single Point of Failure in both physical and virtualized resources. Explain how end to end protection is provided at each layer including compute, storage and network resources.

5B. List the types of ports used in virtual switch. Explain the need of port groups with example.

5C. Differentiate between SOAP and REST protocol used in Web Service Architecture.

(5+3+2)

6A. Explain NIST Security Reference Architecture with neat diagram.

6B. Explain Virtual Machine Files and File Management System.

6C. How to manage movement of active and inactive data in LUN explain with diagram.

(5+3+2)

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