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18CB72

**Seventh Semester B.Tech. Degree Examination, Dec.2023/Jan.2024**

## Cloud Computing

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

### Module-1

- 1 a. What is Cloud Computing? Explain in brief the Cloud Computing reference models. (08 Marks)
- b. Explain the following Cloud Computing Platform and Technologies :
  - i) Amazon Web Services (AWS).
  - ii) Microsoft Azure
  - iii) Hadoop
  - iv) Manjra soft Aneka. (08 Marks)
- c. Describe the main characteristics and benefits of Cloud Computing. (04 Marks)

**OR**

- 2 a. Explain how XEN is different from other virtualization platform. Explain its elements for virtualization. (07 Marks)
- b. Define Virtualization and explain in brief Full virtualization and Para virtualization with its Pro's and Con's. (07 Marks)
- c. Explain with neat diagram, Type – I and Type – II hypervisor. (06 Marks)

### Module-2

- 3 a. Explain the following in detail : (10 Marks)
  - i) Hardware as service    ii) Platform as service    iii) Software as service.
- b. Explain the Open challenges faced in Cloud Computing in detail. (10 Marks)

**OR**

- 4 a. What is Aneka Container? Explain the suitable types of services hosted inside Aneka container. (10 Marks)
- b. Explain the following deployment mode platform for building Aneka cloud :
  - i) Private cloud    ii) Public cloud    iii) Hybrid cloud. (10 Marks)

### Module-3

- 5 a. What is Thread? Explain the thread API's Techniques for parallel computation. (08 Marks)
- b. Differentiate Aneka Thread with Local Thread with diagram. (06 Marks)
- c. Explain the programming applications with Aneka Thread. (06 Marks)

**OR**

- 6 a. Define Task Computing. List and explain computing categories related to Task computing. (07 Marks)
- b. What is Workflow? Explain the workflow technologies for designing and executing workflow based applications. (07 Marks)
- c. With an example, explain Parameter Sweep Application. (06 Marks)

**Module-4**

- 7 a. What is Data Intensive Computing? List all the challenges in Data Intensive Computing and explain each in detail. (10 Marks)
- b. Explain Amazon Dynamo Architecture that support data intensive applications. (10 Marks)

**OR**

- 8 a. Explain the followings :  
 i) IBM General parallel file system      ii) Google File system  
 iii) Amazon simple storage service. (10 Marks)
- b. Explain Map Reduce programming model using Map Reduce computation workflow. (10 Marks)

**Module-5**

- 9 a. Explain the following with respect to Amazon Web services :  
 i) EC2      ii) Cloud watch      iii) EBS      iv) S3. (10 Marks)
- b. Explain the Windows Azure Platform Architecture. (10 Marks)

**OR**

- 10 a. Discuss in detail the following media applications of Cloud Computing Technologies :  
 i) Animoto      ii) Maya Rendering with Aneka      iii) Video Encoding in Cloud. (10 Marks)
- b. Explain the impact of Cloud Computing in health care sector. In brief explain how ECG analysis done through Cloud Computing. (10 Marks)

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