

**Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020**  
**Cloud Computing and its Applications**

Time: 3 hrs.

Max. Marks: 80

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

**Module-1**

- 1 a. Describe the main characteristics and benefits of cloud computing. (04 Marks)
- b. With neat diagram, explain the cloud computing reference model. (06 Marks)
- c. Explain the technologies on which cloud computing relies. (06 Marks)

**OR**

- 2 a. Discuss classification or taxonomy of virtualization at different levels. (08 Marks)
- b. Explain the architecture of Hyper-V and discuss its use in cloud computing. (08 Marks)

**Module-2**

- 3 a. Classify and explain the various types of clouds. (08 Marks)
- b. Describe the fundamental features of the economic and business model behind cloud computing. (08 Marks)

**OR**

- 4 a. Explain the three types of services that are hosted inside the Aneka container. (08 Marks)
- b. Describe the features of the Aneka management tools in terms of infrastructure, platform and applications. (08 Marks)

**Module-3**

- 5 a. Describe the two major techniques used for parallel computing with threads. (08 Marks)
- b. Explain the major differences between Aneka threads and local threads. (08 Marks)

**OR**

- 6 a. List and explain popular frameworks for task computing. (08 Marks)
- b. Explain the features provided by Aneka for the execution of parameter sweep applications (08 Marks)

**Module-4**

- 7 a. What is data-intensive computing? Explain the open challenges in data-intensive computing. (08 Marks)
- b. Explain IBM General Parallel File system (GPFS), Google File System (GFS), and Amazon Simple Storage Service (S3). (08 Marks)

**OR**

- 8 a. Explain the major components of the Aneka Map-reduce programming model. (08 Marks)
- b. Describe the architecture of the data storage layer designed for Aneka-Map-Reduce and I/O APIs for handling Map-Reduce files. (08 Marks)

**Module-5**

- 9 a. Explain Amazon S3 key concepts. (08 Marks)  
b. Describe the core components of Google AppEngine. (08 Marks)

**OR**

- 10 a. Describe how cloud computing technology can be applied to support remote ECG monitoring. (08 Marks)  
b. Describe three examples of CRM and ERP implementations based on cloud computing technologies. (08 Marks)