Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

II SEMESTER MCA
END SEMESTER EXAMINATIONS
MAY 2019

SUBJECT: **CLOUD COMPUTING (MCA 4204)**

REVISED CREDIT SYSTEM

(04/05/2019)

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ALL FIVE** questions.
- Missing data may be suitably assumed.

1A.	With suitable examples and diagrams, explain how Map Reduce works.	**5**
1B.	Explain the key aspects used during hardware virtualization with diagram.	**3**
1C.	How Virtual Machine resource management is done in cloud computing?	**2**
2A.	Explain any three static and dynamic load balancing algorithms.	**5**
2B.	<table><tr><th>Process</th><th>Burst time</th></tr><tr><td>P1</td><td>10</td></tr><tr><td>P2</td><td>4</td></tr><tr><td>P3</td><td>12</td></tr><tr><td>P4</td><td>6</td></tr></table> For the given data, calculate average waiting time using SJF and Round Robin algorithm (time quantum= 4 units). Draw the Gantt chart for the above data.	**3**
2C.	Differentiate between cluster computing and grid computing	**2**
3A.	What are the various steps of cloud life cycle? What is the need for the cloud life cycle?	**5**
3B.	Compare and contrast horizontal and vertical scaling with diagrams.	**3**
3C.	Explain the following terms:- i) Multitenancy ii) Location independence	**2**

4A.	What are the characteristics of Big Data? Explain the major steps involved in the analysis of big data and challenges associated in handling big data.	**5**
4B.	Explain key characteristics of IoT communication models.	**3**
4C.	What are the new security threats in cloud computing?	**2**
5A.	Explain the taxonomy of virtualization techniques.	**5**
5B.	With the cloud computing reference model, explain different types of service models.	**3**
5C.	Write any four laws of Cloudonomics.	**2**