BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M.TECH   SEMESTER : III
BRANCH: CS   SESSION : MO/19

SUBJECT: IT508 CLOUD COMPUTING

TIME: 3 HOURS   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)   (I) Describes the characteristics, benefits and risk in cloud computing.   [2+3]
          (II) What are the major Distributed Computing technologies that led to cloud computing?
Q.1(b)   (I) What is Service- Oriented Computing. Explain.   [2+3]
          (II) What is the major revolution introduced by Web 2.0? Give some examples of Web 2.0
          applications.

Q.2(a)   (I) What are the different components characterizing Distributed Systems?   [2+3=5]
          (II) Describe the software architectural styles for DC (Distributed Computing).
Q.2(b)   (I) What is the difference between distributed objects and RPC?   [2+3=5]
          (II) Describe RPC and how it enables inter-process communication.

Q.3(a)   (I) What is virtualization? Explain characteristic and benefits of virtualization.   [2+3=5]
          (II) Discuss machine reference model of execution virtualization.
Q.3(b)   (I) What are the hardware virtualization techniques?   [2+3]
          (II) Describe storage virtualization and network virtualization briefly.

Q.4(a)   (I) The concept "Everything as a Service"-is one of the most important elements of cloud   [1+4=5]
          computing, explain briefly.
          (II) What are the main characteristics of a PaaS (platform as a service) solution? Describe the
          different categories of options available in PaaS market.
Q.4(b)   Classify the different types of clouds and describe the characteristics, use and most common [5]
          scenario of each cloud with examples.

Q.5(a)   (I) What is Amazon CloudWatch?   [1+3+2=6]
          (II) Describe Amazon Compute and storage service.
          (III) What is the difference between Amazon simple DB and Amazon RDS.
Q.5(b)   Write Short Notes on **(any two):**   [2X2=4]
          (I)   CORBA: Common object request broker architecture.
          (II)   Microsoft HYPER-V: architecture and use
          (III)   Cloud open challenges: interoperability, scalability, fault tolerance, security and
                   privacy.

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