**(2 ½ Hours)**                    **[Total Marks: 60]**

**N.B:**  (1)  **All questions are compulsory.**
(2)  Figures to the **right** indicate full marks.
(3)  **Assume additional data if necessary** but state the same clearly.
(4)  Symbols have their usual meanings and tables have their usual standard design unless stated otherwise.
(5)  Use of **calculators** and statistical tables are **allowed**.


**Q.1**  Attempt **any two** of the following                    **(12)**

**a)**  Explain the RPC reference model with a neat diagram.                    **6**
**b)**  Explain the various advantages of virtualization.                    **6**
**c)**  Explain the various components comprising distributed system.                    **6**
**d)**  Explain the various hardware architectures for parallel processing.                    **6**


**Q.2**  Attempt **any two** of the following                    **(12)**

**a)**  Define Cloud Computing. Explain its characteristics and benefits.                    **6**
**b)**  Explain the concept of Enterprise components.                    **6**
**c)**  Explain the various cloud computing services.                    **6**
**d)**  Explain the concept of Hybrid Clouds and cloud bursting.                    **6**


**Q.3**  Attempt **any two** of the following                    **(12)**

**a)**  Explain following terms with reference to Amazon EC2 Infrastructure as service.                    **6**
(i) Elastic Block Storage (ii) SimpleDB (iii) Amazon Simple Queue Service
**b)**  Differentiate between SOAP and Rest Web services.                    **6**
**c)**  Explain the use of Ajax in cloud computing.                    **6**
**d)**  Explain how Multi-Tenancy is implemented using cloud data stores                    **6**


**Q.4**  Attempt **any two** of the following                    **(12)**

**a)**  Explain the advantages and limits of Dev 2.0.                    **6**
**b)**  Explain the management of core enterprise data using ERP, SCM and CRM with neat diagram.                    **6**
**c)**  Explain the concept of Business logic and rule-based computing.                    **6**
**d)**  Explain the Multitenancy of Dev 2.0 platforms.                    **6**

**Q.5** Attempt **<u>any two</u>** of the following (12)

a) Explain client/server and peer-to-peer architectural styles of distributed systems. **6**

b) Write a short note on tier architectures with TP Monitors. **6**

c) Compare the life cycles of Traditional Multithreading and Aneka based Multithreading with neat diagrams. **6**

d) Explain the concept of Application security in enterprise application **6**

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