

6E7106

Total No. of Questions : 22

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6E7106

B.Tech. VI-Sem. ( Main/Back ) Exam., May-2025

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

6AID4-06 Cloud Computing

CS, IT, AID, CAI, CCS, CIT, CSD

Time : 3 Hours

Maximum Marks : 70

**Instructions to Candidates :**

**Attempt all ten questions from Part-A, five questions out of seven questions from Part-B and three questions out of five questions from Part-C.**

*Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.*

*Use of following supporting materials is permitted during examination.*

*(Mentioned in Form No. 205)*

ersahilkagyan.com

1. ....

2. ....

**PART-A**

**[10×2=20]**

**(Answer should be given up to 25 words only)**

**All questions are compulsory**

**Q.1. Briefly explain the historical journey of the development of Cloud Computing. [2]**

**Q.2. What are the ethical issues in cloud computing? [2]**

- Q.3. Briefly explain the concept of : [2]
- (a) Ubiquitous Cloud
  - (b) Internet of Things
- Q.4. Define virtualization techniques used in Cloud Computing. What are the advantages of virtualization in Cloud Computing? [2]
- Q.5. What are the fundamentals of cloud information security? [2]
- Q.6. What are the cloud security services in cloud computing? [2]
- Q.7. What are the threats in cloud and how it can be identified? [2]
- Q.8. What is the vision and components of cloud computing? [2]
- Q.9. What are the enabling technologies used in cloud computing? [2]
- Q.10. Explain the layers and service models used in cloud computing. [2]

**PART-B**

**[5×4=20]**

**(Analytical/Problem solving questions)**

**Attempt any five questions**

- Q.1. What is the role of Data Center in the Cloud Computing? What are the components required in data center architecture? [4]
- Q.2. Explain the concept of Kernel based virtual machine used in Cloud Computing. [4]
- Q.3. What is Network support in cloud computing? [4]
- Q.4. What are the design principles and policy implementation used for securing the cloud? [4]
- Q.5. Explain Google App Engine. [4]
- Q.6. What are the challenges faced in cloud computing? [4]
- Q.7. Write short notes on the following : [4]
- (a) Protein Structure Prediction
  - (b) Data Analysis

**(Descriptive/Analytical/Problem Solving/Design questions)****Attempt any three questions**

- Q.1. (a) What is the role of virtualization in Cloud Computing? What is hyper visor virtual machine? What are the characteristics of virtualization? [5]
- (b) Write a short note on virtualization of a : [5]
- (i) Server
- (ii) Network
- Q.2. (a) Write a short note on : [6]
- (i) PasS
- (ii) IaaS
- (iii) Hadoop
- (b) Explain the architectural design of compute and storage cloud. What is the role of Map Reduce in Hadoop? [4]
- Q.3. (a) Explain Microsoft Azure Design in detail. [5]
- (b) What is the role of Aneka in the integration of Public and Private Clouds? [5]
- Q.4. (a) What are the challenges, Risk and approaches during migration of data into cloud? [5]
- (b) Evaluate the cloud's business impart and economics. [5]
- Q.5. (a) What challenges we are facing in the security of cloud computing? Explain the architecture of cloud computing security. [5]
- (b) Explain Service Level Agreement (SLA) with the help of diagram and also explain how the trust management can be done in cloud computing security. [5]

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