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DEPARTMENT OF COMPUTER SCIENCE

SEMESTER-VI MAJOR BASED ELECTIVE II (B) CLOUD COMPUTING

Unit I

Cloud Computing Foundation : Introduction to Cloud Computing

– Move to Cloud Computing – Types of Cloud – Working of Cloud Computing.

Unit II

Cloud Computing Architecture : Cloud Computing Technology – Cloud Architecture – Cloud Modeling and Design - Virtualization : Foundation – Grid,Cloud and Virtualization – Virtualization and Cloud Computing.

Unit III

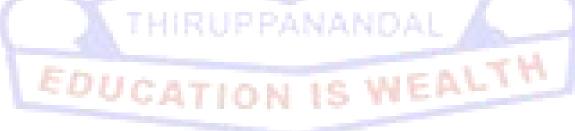
Data Storage and Cloud Computing : Data Storage – Cloud Storage – Cloud Storage from LANs to WANs – Cloud Computing Services : Cloud Services – Cloud Computing at Work.

Unit IV

Cloud Computing and Security : Risks in Cloud Computing – Data Security in Cloud – Cloud Security Services – Cloud Computing Tools : Tools and Technologies for Cloud – Cloud Mashaps – Apache Hadoop – Cloud Tools.

Unit V

Cloud Applications – Moving Applications to the Cloud – Microsoft Cloud Services – Google Cloud Applications – Amazon Cloud Services – Cloud Applications



UNIT – I

Choose the Correct Answer

- 1. What is Cloud Computing replacing?
 - A. Corporate data centers
 - B. Expensive personal computer hardware
 - C. Expensive software upgrades D. All of the above

2. What is the number one concern about Cloud Computing?

- A. Too expensive
- B. Security concerns
- C. Too many platforms
- D. Accessibility
- 3. Which one of these is not a Cloud Computing pricing model?
 - A. Free

 - B. Pay Per Use C. Subscription D. Ladder

Which of these is not a major type of Cloud Computing usage

- A. Hardware as a Service
- B. Platform as a Service
- C. Software as a Service
- D. Infrastructure as a Service
- An Internet connection is necessary for Cloud Computing interaction.
 - A. True
 - B. False
 - C. Sometimes D. Always
- "Cloud" in cloud computing represents what? 6.
 - A. Wireless
 - B. Hard drives
 - C. People
 - D. Internet
- 7. What exactly is Cloud Computing?
 - A. A way to organize desktop computers
 - B. Lightweight software that takes up little space on a hard drive
 - C. Computing resources accessed on demand, like electricity from a utility
 - D. The World Wide Web
- 8. Cloud Computing embraces many concepts that were previously touted as the next big thing in information technology. Which of these is not an antecedent of the cloud? A. Software as a service

 - B. Remote hosted services
 - C. Grid computing
 - D. Desktop computing
- 9. The term "Cloud Computing" is a metaphor that originated in what?
 - A. Graphical depiction of computer architectures
 - B. Meteorological symbolism
 - C. Worries about an unclear future for computing architectures
 - D. The idea that computer users trust in magic

- 10. Which of the architectural layer is used as front end in cloud computing?
 - A. Client
 - B. Cloud
 - C. Soft
 - D. All the Mentioned.

ANSWERS: 1.D 2.B 3.D 4.A 5.A 6.D 7.C 8.D 9.A 10.A

Short Questions (2 marks)

- 11. What is cloud computing?
- **12.** What are the benefits of cloud computing?
- **13.** What is SAAS?
- 14. What are the different types of cloud computing?
- 15. Write down any four features of cloud computing
- 16. What is PAAS?
- 17. What is IAAS?
- **18.** What is hybrid cloud?
- 19. What are the advantages of using Cloud Computing?
- **20.** What is grid computing?

Paragraph Questions (5 marks)

- **21.** Define cloud computing? List out characteristics of cloud computing.
- 22. Explain Cloud Architecture.
- 23. Describe the types of Cloud.
- **24.** Explain about platform as a Service (PaaS).
- 25. Distinguish between Public Cloud and Private Cloud.
- **26.** Explain about Infrastructure as a Service (laaS).
- 27. Explain in detail software-as-a-service.
- 28. Discuss the History of cloud computing.
- 29. Explain Advantages of cloud computing in IT field.
- **30.** Write short notes on Migrating into cloud.

Essay Type Questions (10 Marks)

- 31. Explain briefly about various cloud services and their major providers.
- 32. Write and explain the Cloud echo system.
- **33.** Explain Move to Cloud Computing.
- 34. Explain Pros and Cons of cloud computing.
- 35. Describe the types of cloud computing with examples.
- 36. Explain related technologies into cloud computing.
- 37. Explain key characteristics of cloud and its role.
- 38. Write detailed notes on cloud application architecture.
- **39.** Explain trends in cloud computing.
- 40. Describe cloud migration.

Unit – II Choose the Correct Answer

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- 1. Which of these techniques is vital for creating cloud-computing centers?
 - A. Virtualization
 - B. Transubstantiation
 - C. Cannibalization
 - D. Insubordination
- 2. An internal cloud is...
 - A. An overhanging threat

- B. A career risk for a CIO
- C. A cloud that sits behind a corporate firewall
- D. The group of knowledge workers who use a social network for water-cooler gossip
- 3. Which of the following component is called hypervisor?
 - A. VMS
 - B. VMC
 - C. VMM
 - D. All of the mentioned.
- 4. What facet of cloud computing helps to guard against downtime and determines costs? A. Service-level agreements
 - B. Application programming interfaces
 - C. Virtual private networks
 - D. Bandwidth fees
- 5. What's the most popular use case for public cloud computing today?
 - A. Test and development
 - B. Website hosting
 - C. Disaster recovery
 - D. Business analytics
- 6. Virtual Machine Ware (VMware) is an example of
 - A. Infrastructure Service
 - B. Platform Service
 - C. Software Service
 - D.Hardware Services
- 7. Cloud Service consists of
 - A. Platform, Software, Infrastructure
 - B. Software, Hardware, Infrastructure
 - C. Platform, Hardware, Infrastructure
 - D. Software, Service, Hardware
- 8. In order to participate in cloud-computing, you must be using the following OS
 - A. Windows
 - B. Mac OS
 - C. Linux
 - D. All of the above
- 9. What is private cloud?
 - A. A standard cloud service offered via the Internet
 - B. A cloud architecture maintained within an enterprise data center.
 - C. A cloud service inaccessible to anyone but the cultural elite
 - D. A cloud managed by government authorities
- 10. "Cloud" in cloud computing represents what?
 - A. Wireless
 - B. Hard drives
 - C. People
 - D. Internet

ANSWERS: 1.A 2.C 3.C 4.A 5.A 6.A 7.A 8.D 9.B 10.D

Short Questions (2 marks)

- 11. What is virtualization?
- **12.** Type of virtualization.

- **13.** Define quality assurance in cloud.
- 14. Define echo system model.
- 15. Explain cloud business tier.
- 16. What is combined cloud?
- 17. Define ERMS.
- 18. What is desktop virtualization?
- **19.** Define storage virtualization.
- 20. What is deployment model?

Paragraph Questions (5 marks)

- 21. Explain Single Cloud Site Architecture.
- 22. Discuss Requirement Analysis.
- 23. Write note on application virtualization.
- 24. Describe types of virtualization.
- 25. Explain phases of CDLC.
- 26. Discuss cloud operating system tier.
- 27. Explain SOA and cloud governance.
- 28. Describe network virtualization.
- 29. Explain storage virtualization.
- 30. Explain deployment model of cloud computing.

Essay Type Questions (10 Marks)

- 31. Explain cloud life cycle model.
- 32. Describe cloud modeling and designing in detail.
- 33. Define virtualization. Brief on the types of virtualization.
- 34. Explain role of cloud modeling and architecture.
- 35. Discuss about developing holistic cloud computing in detail.
- 36. Write and Explain cloud eco system model.
- 37. Explain three tier architecture.
- **38.** Explain cloud computing basic principles.
- 39. Write detailed notes on benefits of storage virtualization.

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40. Explain anatomy of cloud infrastructure.

Unit – III **Choose the Correct Answer**

- What is the most basic level of storage
 - A. SAN
 - B. DAS
 - C. NAS
 - D. ISCSI
- 2. A NAS solution is most appropriate for what type of data environment
 - A. Secured Access
 - B. Shared access
 - C. Remote access
 - D. Parallel access
- **3.** This is a method of reducing storage needs by eliminating redundant data A. Data snapshot
 - B. Data compressionC. Data encryption

 - D. Data De-duplication

- 4. This is a feature of storage security that is gaining favor among enterprises that use storage area networks (SANs)
 - A. Data Protection
 - B. Data de-duplicationC. Storage encryption

 - D. Data compression
- 5. Benefits of ghost FS
 - A. High source
 - B. No administration
 - C. Any where
 - D. All the above
- 6. Which demon is responsible for replication of data in Hadoop
 - A. HDFS

 - B. Task Tracker C. Job Tracker
 - D. Name Node
- 7. Which one of the following is not an cloud storage company?
 - A. PCLOUD
 - B. DROPBOX
 - C. IDRIVE
 - D. PIXAR
- 8. Which is not a valid file system
 - A. FXZ
 - B. FAT 16 C. FAT 32

 - D. NTFS
- 9. Without this practice, backing up data is virtually useless
 - A. Data Archival
 - B. Data Retrieval
 - C. Data quality assurance
 - D. Data Recovery
- 10. What are the major benefits of SAN?
 - A. Centralized backup
 - B. Storage consolidationC. LAN-less backup

 - D. All of the mentioned

Answers: 1.B 2.B 3.D 4.C 5.D 6.D 7.D 8.A 9.B 10.D

Short Questions (2 marks)

- 11. What is massive data demand?
- 12. What is direct attached storage (DAS)?
- **13.** Define ghost file system.
- **14.**What is Bigtable?
- 15. Define HBase.
- 16. Explain KDI.
- 17. Define QoS.
- 18. What is SAN?
- 19. What amazon dynamo?
- 20. Define network attached storage (NAS)

Paragraph Questions (5 marks)

- 21. Explain Data Storage Management.
- 22. Explain overview of cloud storage.
- 23. How does cloud storage work? Explain.
- **24.** Explain the Cloud File Systems in detail.
- 25. List and explain various storage models of file systems and data base?
- **26.** Explain cloud data management interface.
- 27. Explain cloud computing elements.
- **28.** Discuss about cloud storage requirements.
- 29. Explain service-based model.
- **30.** Explain features of ghost file system.

Essay Type Questions (10 Marks)

- **31.** Explain the FAT File System.
- **32.** Discuss about management and administrative services.
- 33. Explain cloud storage from LANs to WANs.
- **34.** Explain cloud computing at work.
- 35. Give details about cloud storage requirement.
- **36.** Explain distributed data storage.
- **37.** Write detailed notes on resource pooling and multi-tenancy.
- **38.** Explain Types of data storage.
- **39.** Write note on data protection and availability.
- **40.** Explain application utilizing cloud storage online file system.

Unit – IV Choose the Correct Answer

- 1. What August event was widely seen as an example of the risky nature of cloud computing?
 - A. Spread of Conficker virus
 - B. Gmail outage for more than an hour
 - C. Theft of identities over the Internet
 - D. Power outages in the Midwest
- 2. What is the name of the organization helping to foster security standards for cloud computing?
 - A. Cloud Security Standards Working Group
 - B. Cloud Security Alliance
 - C. Cloud Security WatchDog
 - D. Security in the Cloud Alliance
- **3.** Which of these companies specializes in cloud computing management tools and services?
 - A. RightScale
 - B. Google
 - C. Salesforce.com
 - D. Savis
- 4. Which of the following area of cloud computing is uniquely troublesome?
 - A. Auditing
 - B. Data Integrity
 - C. E-Discovery for legal compliance

- D. All of the above
- 5. What is the number one concern about cloud computing?
 - A. Accessibility
 - B. Too expensiveC. Security concerns

 - D. Too many platforms
- 6. How many categories of storage devices broadly exist in the cloud?
 - A. 2
 - B. 1
 - C. 4
 - D. 3

7. Communication between services is done widely using

- A. REST
- B. SOAP
- C. RESTful
- D. None of the method
- 8. What are the advantages of 3x replication schema in Hadoop
 - A. Fault tolerance
 - B. High availability
 - C. Reliability
 - D. All of the above
- 9. Which of the following model allows vendor to provide security as part of the Service Level Agreement?

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- A. SaaS
- B. PaaS
- C. laaS
- D. None Of these
- All the following accurately describe Hadoop, EXCEPT:
 - A. Open source
 - B. Java-based
 - C. Distributed computing approach
 - D. Real-time

Answer: 1.B 2.B 3.A 4.D 5.C 6.A 7.B 8.D 9.A 10.D

Short Questions (2 marks)

- 11. Define two kinds of cloud computing providers.
- 12. What is data loss?
- 13. Explain Levels of cloud.
- 14. Define logging.
- **15.** Define data centralization.
- 16. Explain homo sapiens.
- 17. Define DRP.
- 18. What is CLS?
- **19.** What is parallel computing?
- 20. Define apache Hadoop.

Paragraph Questions (5 marks)

21. Discuss about the workflow management system.

- **22.** Explain the data security in the cloud.
- 23. Types of risks in cloud computing.
- 24. Describe the cloud security services.
- 25. Explain about cloud mashup.
- 26. Explain apache Hadoop.
- 27. Discuss security disadvantage in cloud environment.
- 28. Explain two prime mechanisms for client access.
- 29. Explain general model for application platform.
- Describe Control level security (CLS).

Essay Type Questions (10 Marks)

- Discuss the risks in cloud computing.
- 32. Explain the tools and technologies of cloud.
- **33.** Write note on cloud security services.
- 34. Discuss about cloud tools in detail.
- 35. Explain the Risk management process.
- **36.** Explain the cloud computing platform.
- 37. Give detailed notes on Levels of cloud computing.
- 38. Describe about cloud computing application platform.
- 39. Explain the components eucalyptus.
- Explain the security disadvantage in cloud environment.

Unit – V Choose the Correct Answer

- 1. Which of these companies is not a leader in cloud computing?
 - A. Google
 - B. Amazon
 - C. Blackboard
 - D. Microsoft
- What is Google's event-driven serverless compute platform? 2.
 - A. Google Cloud Functions
 - B. Google Kubernetes Engine (GKE) On-Prem
 - C. Google App Engine
 - D. Knative
- **3.** Point out the correct statement.
 - A. Amazon Elastic Cloud is a system for creating virtual disks(volume)
 - B. SimpleDB interoperates with both Amazon EC2 and Amazon S3
 C. EC3 is an Analytics as a Service provider

 - D. None of the mentioned
- 4. Which is not a major cloud computing platform?
 - A. Google 101
 - B. IBM Deep blue
 - C. Microsoft Azure
 - D. Amazon EC2
- 5. Which of these should a company consider before implementing cloud computing technology?
 - A. Employee satisfaction
 - B. Potential cost reduction
 - C. Information sensitivity
 - D. All of the above

- 6. Which of the following is not a google cloud application?
 - A. Gmail
 - B. Google calender
 - C. Google docs
 - D. Google play music
- **7.** Which of the following is a structured data store that supports indexing and data queries to both EC2 and S3?
 - A. CloudWatch
 - B. Amazon SimpleDB
 - C. Amazon Cloudfront
 - D. All of the mentioned
- 8. 5. What is the name of Rackspace's cloud service?
 - A. Cloud On-Demand
 - B. Cloud Servers
 - C. EC2

D.Amazon S3

- 9. Google Apps Engine is a type of
 - A. SaaS
 - B. PaaS
 - C. laaS
 - D. NA

10. Amazon Web Services is which type of cloud computing distribution model?

- A. Software as a Service
- B. Platform as a Service
- C. Infrastructure as a Service
- D. Hardware as a Service

ANSWERS: 1.C 2.A 3.B 4.B 5.D 6.D 7.B 8.B 9.D 10.C

Short Questions (2 marks)

- **11.** Define Enterprise growth.
- 12. What is CRM?
- 13. Define Web hosting.
- **14.** What is batch processing?
- 15. Explain windows azure.
- 16. Write any four Google Cloud application.
- 17. What is AWS?
- 18. Define Elasticity Cloud Computing.
- 19. Define Amazon S3.
- 20. Define yahoo Zimbra.

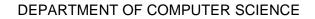
Paragraph Questions (5 marks)

- **21.** Explain the Amazon Web Service.
- 22. Write short notes on Google Cloud Application.
- **23.** Explain in detail about Google File System (GFS) Architecture.
- 24. Explain about Microsoft Windows Azure.
- **25.** Describe Business opportunities using Cloud.
- 26. Discuss Application shifted to the Cloud.
- 27. Explain Google Groups.
- 28. Describe Amazon Cloud watch.
- **29.** Explain Cloud Computing services.
- **30.** Explain Hedge capital utilizing cloud computing.

Essay Type Questions (10 Marks)

- 31. Explain about Amazon simple storage service (S3).
- 32. Explain in detail about Amazon EC2 along with its associated services provided by Amazon.
- **33.** Describe Google App Engine in detail.

- 34. Explain moving application into cloud.
 35. Write note on Cloud Application.
 36. Explain Microsoft Cloud services.
 37. Discuss about Google Cloud Application.
- 38. Explain Amazon Machine image and interface.
- 39. Describe Cloud software for private banking.40. Explain Cloud Software for Asset management.



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