# SRM VALLIAMMAI ENGINEERING COLLEGE

SRM Nagar, Kattankulathur – 603 203

#### **DEPARTMENT OF**

#### ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

## **QUESTION BANK**



#### **VI SEMESTER**

#### 1922607 - INTRODUCTION TO CLOUD COMPUTING

Regulation - 2019

Academic Year 2024 - 2025 EVEN

Prepared by

Mr.R. Danu, Assistant Professor/AI-DS



## SRM VALLIAMMAI ENGNIEERING COLLEGE

SRM Nagar, Kattankulathur – 603203.



#### **DEPARTMENT OF** ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

### **QUESTION BANK**

**SUBJECT: 1922607 – INTRODUCTION TO CLOUD COMPUTING** 

SEM / YEAR: VI / III

#### **UNIT I - INTRODUCTION**

Introduction to Cloud Computing – Definition of Cloud – Evolution of Cloud Computing – Underlying

demand Provisioning.  PART-A (2 - MARKS)				
Q. No	QUESTIONS	BTL	Competence	
1.	What is meant by the term Cloud Computing?	BTL1	Remembering	
2.	What is Grid Computing?	BTL2	Understanding	
3.	State the purpose of NCP.	BTL2	Understanding	
4.	Mention the four key elements in parallel and distributed computing.	BTL1	Remembering	
5.	Explain the challenges in Cloud technologies.	BTL1	Remembering	
6.	Define Cloud Computing.	BTL1	Remembering	
7.	Compare Parallel Computing and Centralized computing.	BTL1	Remembering	
8.	List out the cluster design issues.	BTL1	Remembering	
9.	Show the difference between thin and thick client.	BTL1	Remembering	
10.	Draw a neat diagram for cloud components.	BTL2	Understanding	
11.	Name the essential characteristics of cloud computing.	BTL1	Remembering	
12.	Give the advantages of cloud computing.	BTL2	Understanding	
13.	Highlight the importance of the term "cloud computing".	BTL2	Understanding	
14.	Identify any two advantages of distributed computing.	BTL2	Understanding	
15.	Bring out the differences between private cloud and public cloud.	BTL2	Understanding	
16.	Illustrate the evolutionary trend towards distributed and cloud computing.	BTL2	Understanding	
17.	What are the characteristics of cloud architecture that separates it from traditional one?	BTL2	Understanding	
18.	Interpret the cloud resource pooling.	BTL2	Understanding	
19.	Outline the elasticity in cloud.	BTL2	Understanding	
20.	Mention the difference between elasticity and scalability in cloud computing.	BTL2	Understanding	
21.	Specify few drawbacks of grid computing.	BTL2	Understanding	
22.	How is On Demand provisioning of resources applied in cloud computing?	BTL2	Understanding	
23.	Assess the properties of Cloud Computing.	BTL2	Understanding	
24.	Formulate the technologies on which cloud computing relies.	BTL2	Understanding	

	PART-B (13- MARKS)				
1.	Discuss in detail about view of cloud computing with neat diagram	13	BTL1	Remembering	
2.	Explain in detail about Internet Software Evolution.	13	BTL3	Applying	
3	Illustrate about the elements of parallel computing with neat diagram.	13	BTL3	Applying	
4.	Describe in detail about practical examples of cloud systems exist across market segments.	13	BTL1	Remembering	
5.	Define and examine in detail about the multi core CPUs and multithreading technologies.	13	BTL3	Applying	
6.	Illustrate in detail about parallel and distributed programming models.	13	BTL2	Understanding	
	<ul><li>i) Describe the infrastructure requirements for Cloud computing.</li><li>ii) What are the issues in cluster design? How can they be resolved?</li></ul>	6 7	BTL1	Remembering	
	<ul><li>i) Summarize in detail about the degrees of parallelism.</li><li>ii) Discuss the application of high performance and high throughput</li></ul>	6	BTL3	Applying	
	system.	7			
	<ul><li>i) Illustrate the cloud architecture in detail.</li><li>ii)Describe the architecture of a cluster with suitable illustrations.</li></ul>	6 7	BTL2	Understanding	
10.	Explain about evolution of cloud computing in detail.	13	BTL3	Applying	
11.	Explain in detail underlying principles of Parallel and Distributed Computing.	13	BTL2	Understanding	
12	Explain in detail about the trends towards Cloud Computing.	13	BTL3	Applying	
	Give the importance of cloud computing and elaborate the different types of services offered by it.	13	BTL4	Analyzing	
14	Explain in detail about characteristics of Cloud.	13	BTL5	Evaluating	
15	Generalize the ideas of software environments for distributed systems and clouds.	13	BTL6	Creating	
16	Explain the hardware architecture of parallel processing with a neat diagram.	13	BTL3	Applying	
17	Explain the software architecture styles for distributed computing.	13	BTL2	Understanding	
	PART-C (15- MARK)				
1.	Explain in detail about hardware architecture of parallel processing with neat diagram.	15	BTL5	Evaluating	
2.	Create and justify Cloud architecture application design with neat sketch.	15	BTL6	Creating	
3.	Briefly Explain each of the cloud computing services. Identify two cloud providers by company name in each service category.	15	BTL6	Creating	
4.	What are the components of distributed system? Draw and explain its layered view architecture.	15	BTL4	Analyzing	
5.	Illustrate the architectural styles for distributed computing.	15	BTL5	Evaluating	
	UNIT II- VIRTUALIZATION		<u> </u>		

Basics of Virtualization - Types of Virtualizations - Implementation Levels of Virtualization -Virtualization Structures - Tools and Mechanisms - Virtualization of CPU - Memory - I/O Devices -Virtualization Support and Disaster Recovery.

#### PART-A (2 - MARKS)

1.   What is mean by Virualization?   BTL1   Remembering	Q. No	QUESTIONS		BTL	Competence
Bright   B		What is mean by Virtualization?		BTL1	Remembering
Define Web services.   BTL1   Remembering	2.	Define SOA.		BTL1	Remembering
5. What is the purpose of WSDL and UDDI? 6. What are the fundamental components of SOAP specification? 7. List the essential principles of SOA architecture. 8. Define REST and its working. 9. State the most relevant technologies supporting service computing. 10. What do you mean by systems of systems? Give examples. 11. Identify the role of Web services in cloud technologies. 12. Discuss the purpose of Publish-Subscribe Model. 13. Specify the name of Web services tools. 14. Distinguish between physical and virtual clusters. 15. What are the benefits of virtualization in the context of cloud computing? 16. Compare binary translation with full virtualization. 17. How does the virtualization Support the Linux platform? 18. Discuss on the support of middleware for virtualization. 19. Discuss classification or taxonomy of virtualization. 19. Discuss classification or taxonomy of virtualization. 20. List the Merits of virtualization and para-virtualization. 21. Understanding BTL2. Understanding BTL2. Understanding Understanding Discuss on the support of middleware for virtualization. 22. Differentiate full virtualization and para-virtualization. 23. Define memory virtualization and para-virtualization. 24. Define Application virtualization and para-virtualization. 25. Define memory virtualization and para-virtualization. 26. Describe in detail about characteristics of virtualized environments. 27. Describe in detail about characteristics of virtualized environments. 28. Explain in the working of public subscribe model. 29. Describe in detail about the REST a software architecture style for distributed systems. 20. Describe in detail about the REST a software architecture style for distributed systems. 21. Describe in detail about the REST a software architecture style for distributed systems. 22. Describe in detail about the REST a software architecture style for distributed systems. 33. Explain what you understand the technologies that make up the core of today's web services technologies fack with neat sketch. 34.	3.	Express the levels of virtualization.		BTL2	Understanding
6. What are the fundamental components of SOAP specification? 7. List the essential principles of SOA architecture. 8 TL1 Remembering 8. Define REST and its working. 9. State the most relevant technologies supporting service computing. 10. What do you mean by systems of systems? Give examples. 11. Identify the role of Web services in cloud technologies. 12. Discuss the purpose of Publish-Subscribe Model. 13. Specify the name of Web services tools. 14. Distinguish between physical and virtual clusters. 15. What are the benefits of virtualization in the context of cloud computing? 16. Compare binary translation with full virtualization. 17. How does the virtualization Support the Linux platform? 18. Discuss on the support of middleware for virtualization. 19. Discuss classification or taxonomy of virtualization at different levels. 20. List the Merits of virtualization at various levels. 21. Illustrate the three structures of virtualization. 22. Differentiate full virtualization. 23. Define memory virtualization. 24. Define Application virtualization. 25. Describe in detail about SOA and Web services. 26. Describe in detail about to SOA and Web services. 27. Explain the working of public subscribe model. 28. Explain the working of public subscribe model. 29. Describe in detail about the REST a software architecture style for distributed systems. 29. Describe in detail about the REST a software architecture style for distributed systems. 20. Describe in detail about the REST a software architecture style for distributed systems. 21. Explain what you understand the technologies that make up the core of today's web services. 29. Describe in detail about the REST a software architecture style for distributed systems. 30. Explain about REST in detail. 31. Serual about the REST a software architecture style for distributed systems. 31. Serual about the taxonomy of virtualization techniques. 42. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them. 43. Summarize th	4.	Define Web services.		BTL1	Remembering
7. List the essential principles of SOA architecture.  8. Define REST and its working.  9. State the most relevant technologies supporting service computing.  9. State the most relevant technologies supporting service computing.  9. State the most relevant technologies supporting service computing.  9. State the most relevant technologies supporting service computing.  9. State the most relevant technologies supporting service computing.  9. BTL1  10. What do you mean by systems of systems? Give examples.  11. Identify the role of Web services in cloud technologies.  12. Discuss the purpose of Publish-Subscribe Model.  13. Specify the name of Web services tools.  14. Distinguish between physical and virtual clusters.  15. What are the benefits of virtualization in the context of cloud computing?  16. Compare binary translation with full virtualization.  17. How does the virtualization Support the Linux platform?  18. Discuss on the support of middleware for virtualization.  19. Discuss classification or taxonomy of virtualization at different levels.  19. Discuss classification or taxonomy of virtualization at different levels.  20. List the Merits of virtualization at various levels.  21. Illustrate the three structures of virtualization.  22. Differentiate full virtualization and para-virtualization.  23. Define memory virtualization.  24. Define Application virtualization.  25. Describe in detail about SOA and Web services.  26. Describe in detail about SOA and Web services.  27. Describe in detail about SOA and Web services.  28. Describe in detail about services.  29. Describe in detail about of public subscribe model.  20. Describe in detail about the REST a software architecture style for doday's web services.  20. Describe in detail about the REST a software architecture style for distributed systems.  21. Compare and contrast them.  22. Summarize the virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  23. Summarize the virtualization for data center au	5.	What is the purpose of WSDL and UDDI?		BTL2	Understanding
8. Define REST and its working. 9. State the most relevant technologies supporting service computing. 10. What do you mean by systems of systems? Give examples. 11. Identify the role of Web services in cloud technologies. 12. Discuss the purpose of Publish-Subscribe Model. 13. Specify the name of Web services tools. 14. Distinguish between physical and virtual clusters. 15. What are the benefits of virtualization in the context of cloud computing? 16. Compare binary translation with full virtualization. 17. How does the virtualization Support the Linux platform? 18. Discuss on the support of middleware for virtualization. 19. Discuss classification or taxonomy of virtualization at different levels. 20. List the Merits of virtualization at various levels. 21. Illustrate the three structures of virtualization. 22. Differentiate full virtualization. 23. Define Application virtualization. 24. Describe in detail about SOA and Web services. 25. Describe in detail about characteristics of virtualized environments. 26. Explain the working of public subscribe model. 27. Explain what you understand the technologies that make up the core of today's web services. 28. Explain the working of public subscribe model. 39. Describe in detail about the REST a software architecture style for distributed systems. 30. Summarize the virtualization? Describe about para and full virtualization and para chitectures. Compare and contrast them. 30. Summarize the virtualization for data center automation. 30. Explain about REST in detail. 31. BTL1 Applying 32. Describe in detail about the REST a software architecture style for distributed systems. 32. Obscribe in detail about the REST a software architecture style for a distributed systems. 33. Summarize the virtualization for data center automation. 44. Illustrate the wirtualization for data center automation. 45. Summarize the virtualization for data center automation. 46. Summarize the virtualization for data center automation. 47. Applying 48. Applying 49. Analyze the pros and cons of	6.	What are the fundamental components of SOAP specification?		BTL1	Remembering
9. State the most relevant technologies supporting service computing. 10. What do you mean by systems of systems? Give examples. 11. Identify the role of Web services in cloud technologies. 12. Discuss the purpose of Publish-Subscribe Model. 13. Specify the name of Web services tools. 14. Distinguish between physical and virtual clusters. 15. What are the benefits of virtualization in the context of cloud computing? 16. Compare binary translation with full virtualization. 17. How does the virtualization Support the Linux platform? 18. Discuss on the support of middleware for virtualization. 19. Discuss classification or taxonomy of virtualization at different levels. 20. List the Merits of virtualization at various levels. 21. Illustrate the three structures of virtualization. 22. Differentiate full virtualization. 23. Define memory virtualization. 24. Define Application virtualization. 25. Describe in detail about SOA and Web services. 26. Describe in detail about SOA and Web services. 27. PART-B (13- MARK) 28. Describe in detail about characteristics of virtualized environments. 29. Discribe in detail about characteristics of virtualized environments. 20. List the Web services technologies stack with neat sketch. 21. Britzal Applying 22. Describe in detail about the REST a software architecture style for distributed systems. 28. Summarize the virtualization of public subscribe model. 39. Applying 30. Describe in detail about the REST a software architecture style for distributed systems. 30. Poscoribe in detail about the REST a software architecture style for distributed systems. 31. Applying 32. Describe in detail about the REST a software architecture style for distributed systems. 42. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them. 43. Summarize the virtualization for data center automation. 44. Applying 45. Explain about REST in detail. 45. Applying 46. Describe in detail about the taxonomy of virtualization techniques. 47. Britzal Applying 48.	7.	List the essential principles of SOA architecture.		BTL1	Remembering
10. What do you mean by systems of systems? Give examples.   BTL1   Remembering	8.	Define REST and its working.		BTL1	Remembering
11. Identify the role of Web services in cloud technologies.   BTL2   Understanding     12. Discuss the purpose of Publish-Subscribe Model.   BTL2   Understanding     13. Specify the name of Web services tools.   BTL2   Understanding     14. Distinguish between physical and virtual clusters.   BTL2   Understanding     15. What are the benefits of virtualization in the context of cloud computing?   BTL2   Understanding     16. Compare binary translation with full virtualization.   BTL2   Understanding     17. How does the virtualization Support the Linux platform?   BTL2   Understanding     18. Discuss on the support of middleware for virtualization.   BTL2   Understanding     19. Discuss classification or taxonomy of virtualization at different levels.   BTL2   Understanding     19. Discuss classification or taxonomy of virtualization at different levels.   BTL2   Understanding     10. List the Merits of virtualization at various levels.   BTL2   Understanding     11. Understanding   Understanding   Understanding     12. Differentiate full virtualization and para-virtualization.   BTL2   Understanding     13. BTL2   Understanding   Understanding     14. Describe in detail about SOA and Web services.   BTL2   Understanding     15. Describe in detail about characteristics of virtualized environments.   BTL1   Remembering     15. Explain what you understand the technologies stack with neat sketch.   BTL1   Applying     15. Explain what you understand the technologies that make up the core of today's web services.   Describe in detail about the REST a software architecture style for distributed systems.   BTL1   Applying     18. Discuss fast deployment, effective scheduling and high-performance   BTL1   Applying     19. Apalyze the pros and cons of virtualization in detail.   Discuss in detail about virtualization for data center automation.   BTL1   Applying     19. Explain in detail about the taxonomy of virtualization techniques.   BTL3   Applying     19. Explain in detail about the taxonomy of virtualization	9.	State the most relevant technologies supporting service computing.		BTL1	Remembering
12. Discuss the purpose of Publish-Subscribe Model.   BTL2   Understanding   Specify the name of Web services tools.   BTL2   Understanding   Distinguish between physical and virtual clusters.   BTL2   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   Understanding   STL5   Understanding   Understanding   STL5   Understanding   STL5   Understanding   Understanding   STL5   Understanding   Understanding   Understanding   STL5   Understanding   Under	10.	What do you mean by systems of systems? Give examples.		BTL1	Remembering
12. Discuss the purpose of Publish-Subscribe Model.   BTL2   Understanding   Specify the name of Web services tools.   BTL2   Understanding   Distinguish between physical and virtual clusters.   BTL2   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   STL5   Understanding   Understanding   STL5   Understanding   Understanding   STL5   Understanding   STL5   Understanding   Understanding   STL5   Understanding   Understanding   Understanding   STL5   Understanding   Under	11.	Identify the role of Web services in cloud technologies.		BTL2	Understanding
13. Specify the name of Web services tools.   BTL2   Distinguish between physical and virtual clusters.   BTL2   Understanding     15. What are the benefits of virtualization in the context of cloud computing?   BTL2   Understanding     16. Compare binary translation with full virtualization.   BTL2   Understanding     17. How does the virtualization Support the Linux platform?   BTL2   Understanding     18. Discuss on the support of middleware for virtualization.   BTL2   Understanding     19. Discuss classification or taxonomy of virtualization at different levels.   BTL2   Understanding     19. Discuss classification or taxonomy of virtualization.   BTL2   Understanding     19. List the Merits of virtualization at various levels.   BTL2   Understanding     19. List the Merits of virtualization at various levels.   BTL2   Understanding     19. List the Merits of virtualization at various levels.   BTL2   Understanding     10. List the Merits of virtualization and para-virtualization.   BTL2   Understanding     12. Lillustrate the three structures of virtualization.   BTL2   Understanding     13. Lillustrate the Understanding   Understanding     14. Liptical Li	12.			BTL2	0
14. Distinguish between physical and virtual clusters.   BTL2   Understanding     15. What are the benefits of virtualization in the context of cloud computing?   BTL2   Understanding     16. Compare binary translation with full virtualization.   BTL2   Understanding     17. How does the virtualization Support the Linux platform?   BTL2   Understanding     18. Discuss on the support of middleware for virtualization.   BTL2   Understanding     19. Discuss classification or taxonomy of virtualization at different levels.   BTL2   Understanding     10. List the Merits of virtualization at various levels.   BTL2   Understanding     11. Understanding   Understanding     12. Differentiate full virtualization and para-virtualization.   BTL2   Understanding     12. Define memory virtualization.   BTL2   Understanding     13. Describe in detail about SOA and Web services.   BTL1   Understanding     14. Describe in detail about SOA and Web services.   BTL1   Remembering     15. Describe in detail about characteristics of virtualized environments.   BTL1   Applying     18. Discontinualization   BTL2   Understanding     19. Describe in detail about the REST a software architecture style for distributed systems.   BTL1   Applying     19. Describe in detail about the REST a software architecture style for distributed systems.   BTL3   Applying     19. Analyze the pros and constrast them.   BTL3   Applying     19. Analyze the pros and cons of virtualization in detail.   BTL3   Applying     19. Explain about REST in detail.   7   Applying     10. Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.   13   BTL3   Applying     19. Explain in detail about the taxonomy of virtualization techniques.   13   BTL3   Applying     18. Discuss in detail about virtualization tools and mechanism.   13   BTL3   Applying     17. Understanding	-			BTL2	Ü
15. What are the benefits of virtualization in the context of cloud computing? 16. Compare binary translation with full virtualization. 17. How does the virtualization Support the Linux platform? 18. Discuss on the support of middleware for virtualization. 19. Discuss classification or taxonomy of virtualization at different levels. 20. List the Merits of virtualization at various levels. 21. Illustrate the three structures of virtualization. 22. Differentiate full virtualization and para-virtualization. 23. Define memory virtualization. 24. Define Application virtualization. 25. Differentiate full virtualization. 26. Describe in detail about SOA and Web services. 27. Describe in detail about tharacteristics of virtualized environments. 28. Explain the working of public subscribe model. 29. Describe in detail about therefore today's web services. 20. Explain what you understand the technologies that make up the core of today's web services. 39. Explain what you understand the technologies that make up the core of distributed systems. 40. Clescribe in detail about the REST a software architecture style for distributed systems. 41. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them. 42. Summarize the virtualization for data center automation. 43. BTL3 Applying 44. Summarize the virtualization for data center automation. 45. Summarize the virtualization for data center automation. 46. Summarize the virtualization for data center automation. 47. What is virtualization for data center automation. 48. Summarize the virtualization for data center automation. 49. Analyze the pros and cons of virtualization in detail. 40. Discuss fast deployment, effective scheduling and high-performance virtual storage in detail. 41. Discuss in detail about the taxonomy of virtualization techniques. 41. Discuss in detail about virtualization tools and mechanism. 41. BTL1 Inderstanding	14.	1 1			
16. Compare binary translation with full virtualization. 17. How does the virtualization Support the Linux platform? 18. Discuss on the support of middleware for virtualization. 19. Discuss classification or taxonomy of virtualization at different levels. 20. List the Merits of virtualization at various levels. 21. Illustrate the three structures of virtualization. 22. Differentiate full virtualization and para-virtualization. 23. Define memory virtualization. 24. Define Application virtualization. 25. Describe in detail about SOA and Web services. 26. Describe in detail about tharacteristics of virtualized environments. 27. Describe in detail about characteristics of virtualized environments. 28. Explain the working of public subscribe model. 29. Describe in detail about the REST a software architecture style for distributed systems. 20. Explain what you understand the technologies that make up the core of today's web services. 30. Describe in detail about the REST a software architecture style for distributed systems. 40. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them. 41. Summarize the virtualization for data center automation. 42. Describe in detail about the REST in detail. 43. BTL3 Applying 44. Summarize the virtualization for data center automation. 45. Summarize the virtualization for data center automation. 47. Applying 48. Summarize the virtualization for data center automation. 49. Analyze the pros and cons of virtualization in detail. 40. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail. 41. Discuss in detail about the taxonomy of virtualization techniques. 43. BTL2 Understanding 44. Illustrate the migration steps and performance effects involved in 45. Applying 46. Describe in detail about the taxonomy of virtualization techniques. 47. Applying 48. BTL3 Applying 49. Analyze the pros and cons of virtualization tools and mechanism. 40. BTL2 Understanding	-		σ?		U
17. How does the virtualization Support the Linux platform?   BTL2 Understanding     18. Discuss on the support of middleware for virtualization.   BTL2 Understanding     19. Discuss classification or taxonomy of virtualization at different levels.   BTL2 Understanding     20. List the Merits of virtualization at various levels.   BTL2 Understanding     21. Illustrate the three structures of virtualization.   BTL2 Understanding     22. Differentiate full virtualization and para-virtualization.   BTL2 Understanding     23. Define memory virtualization and para-virtualization.   BTL1 Understanding     24. Define Application virtualization.   BTL1 Understanding     25. Describe in detail about SOA and Web services.   13 BTL3 Applying     26. Describe in detail about characteristics of virtualized environments.   13 BTL3 Applying     27. Explain what you understand the technologies stack with neat sketch.   13 BTL3 Applying     28. Explain what you understand the technologies that make up the core of today's web services.   Describe in detail about the REST a software architecture style for distributed systems.   BTL3 Applying     3. Explain about the REST a software architecture style for distributed systems.   BTL3 Applying     4. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.   BTL3 Applying     5. Describe in detail about the REST a software architecture style for architectures. Compare and contrast them.   BTL3 Applying     6. Summarize the virtualization for data center automation.   13 BTL3 Applying     9. Analyze the pros and cons of virtualization in detail.   13 BTL3 Applying     10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.   6     11. Discuss in detail about the taxonomy of virtualization techniques.   13 BTL3 Applying     12. Explain in detail about virtualization tools and mechanism.   13 BTL3 Applying     13. BTL3 Applying			<u> </u>		
18. Discuss on the support of middleware for virtualization.  19. Discuss classification or taxonomy of virtualization at different levels.  20. List the Merits of virtualization at various levels.  21. Illustrate the three structures of virtualization.  22. Differentiate full virtualization and para-virtualization.  23. Define memory virtualization.  24. Define Application virtualization.  25. Describe in detail about SOA and Web services.  26. Describe in detail about characteristics of virtualized environments.  27. Illustrate the Web services technologies stack with neat sketch.  28. Explain the working of public subscribe model.  29. Explain what you understand the technologies that make up the core of today's web services.  20. Describe in detail about the REST a software architecture style for distributed systems.  21. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  29. Analyze the pros and cons of virtualization in detail.  20. Discuss fast deployment, effective scheduling and high-performance virtual storage in detail about the taxonomy of virtualization techniques.  20. Discuss in detail about the taxonomy of virtualization techniques.  21. Illustrate the migration steps and performance effects involved in the surface and contrast them.  22. Describe in detail about the taxonomy of virtualization techniques.  23. Describe in detail about the taxonomy of virtualization techniques.  24. Describe in detail about the REST in detail.  25. Describe in detail about the taxonomy of virtualization techniques.  26. Describe in detail about the taxonomy of virtualization techniques.  27. Analyze the pros and consolved in the taxonomy of virtualization techniques.  28. Applying  29. Analyze the pros and consolved in the taxonomy of virtualization techniques.  29. Applying					Ü
19. Discuss classification or taxonomy of virtualization at different levels.  20. List the Merits of virtualization at various levels.  21. Illustrate the three structures of virtualization.  22. Differentiate full virtualization and para-virtualization.  23. Define memory virtualization.  24. Define Application virtualization.  25. Describe in detail about SOA and Web services.  26. Describe in detail about characteristics of virtualized environments.  27. Explain the working of public subscribe model.  28. Explain the working of public subscribe model.  29. Explain what you understand the technologies that make up the core of today's web services.  20. Describe in detail about the REST a software architecture style for distributed systems.  21. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  20. Summarize the virtualization for data center automation.  21. BTL3 Applying  22. Describe in detail about the REST in detail.  23. Explain in detail about the taxonomy of virtualization techniques.  24. Describe in detail about the taxonomy of virtualization techniques.  25. Constant and full virtualization todes and mechanism.  26. Describe in detail about the REST a software architecture style for distributed systems.  27. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  28. Summarize the virtualization for data center automation.  29. Analyze the pros and cons of virtualization in detail.  20. Explain in detail about the taxonomy of virtualization techniques.  20. Describe in detail about the taxonomy of virtualization techniques.  20. Describe in detail about virtualization tools and mechanism.  20. Describe in detail about virtualization tools and mechanism.  21. Discuss in detail about the taxonomy of virtualization techniques.  21. Discussing the titulation of the taxonomy of virtualization techniques.  21. Discussing the titulation of the taxonomy of virtualization techniques.  21. Disc					
20. List the Merits of virtualization at various levels. 21. Illustrate the three structures of virtualization. 22. Differentiate full virtualization and para-virtualization. 23. Define memory virtualization. 24. Define Application virtualization.  PART-B (13- MARK)  1. Describe in detail about SOA and Web services. 2. Describe in detail about characteristics of virtualized environments. 3. Explain the working of public subscribe model. 4. Illustrate the Web services technologies stack with neat sketch. 4. Illustrate the Web services technologies that make up the core of today's web services.  Describe in detail about the REST a software architecture style for distributed systems.  7. Describe in detail about the REST a software architecture style for architectures. Compare and contrast them.  8. Summarize the virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL1 Understanding  14. Understanding  BTL2 Understanding					Ü
Illustrate the three structures of virtualization.   BTL2   Understanding		· ·			
22. Differentiate full virtualization and para-virtualization.  23. Define memory virtualization.  24. Define Application virtualization.  PART-B (13- MARK)  1. Describe in detail about SOA and Web services.  2. Describe in detail about characteristics of virtualized environments.  3. Explain the working of public subscribe model.  4. Illustrate the Web services technologies stack with neat sketch.  5. Explain what you understand the technologies that make up the core of today's web services.  6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii) Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about virtualization tools and mechanism.  12. Explain in detail about virtualization steps and performance effects involved in  13. BTL3. Understanding					
23. Define memory virtualization.  24. Define Application virtualization.  PART-B (13- MARK)  1. Describe in detail about SOA and Web services.  2. Describe in detail about characteristics of virtualized environments.  3. Explain the working of public subscribe model.  4. Illustrate the Web services technologies stack with neat sketch.  5. Explain what you understand the technologies that make up the core of today's web services.  6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii) Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about virtualization tools and mechanism.  12. Explain in detail about virtualization steps and performance effects involved in  13. BTL2 Understanding				BTL2	
PART-B (13- MARK)  1. Describe in detail about SOA and Web services.  2. Describe in detail about characteristics of virtualized environments.  3. Explain the working of public subscribe model.  4. Illustrate the Web services technologies stack with neat sketch.  5. Explain what you understand the technologies that make up the core of today's web services.  6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii) Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about virtualization tools and mechanism.  12. Explain in detail about virtualization steps and performance effects involved in  13. BTL2. Understanding					
PART-B (13- MARK)  1. Describe in detail about SOA and Web services.  2. Describe in detail about characteristics of virtualized environments.  3. Explain the working of public subscribe model.  4. Illustrate the Web services technologies stack with neat sketch.  5. Explain what you understand the technologies that make up the core of today's web services.  6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  13. BTL3 Applying  14. BTL3 Applying  15. Applying  16. BTL3 Applying  17. Applying  18. Applying  18. BTL3 Applying  19. Analyze the pros and cons of virtualization in detail.  19. Explain about REST in detail.  10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  10. Discuss in detail about the taxonomy of virtualization techniques.  11. BTL3 Applying  12. Explain in detail about virtualization tools and mechanism.  13. BTL3 Applying  14. Understanding				BTL1	Remembering
2. Describe in detail about characteristics of virtualized environments.  3. Explain the working of public subscribe model.  4. Illustrate the Web services technologies stack with neat sketch.  5. Explain what you understand the technologies that make up the core of today's web services.  6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  13. BTL1 Remembering  Applying  6. Applying  14. BTL3 Applying  15. BTL3 Applying  16. BTL3 Applying  17. BTL3 Applying  18. Applying  19. Explain about REST in detail.  10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  10. Discuss in detail about the taxonomy of virtualization techniques.  11. Explain in detail about virtualization tools and mechanism.  12. Explain in detail about virtualization steps and performance effects involved in  13. BTL2 Understanding					3
<ol> <li>Describe in detail about characteristics of virtualized environments.</li> <li>Explain the working of public subscribe model.</li> <li>Illustrate the Web services technologies stack with neat sketch.</li> <li>Explain what you understand the technologies that make up the core of today's web services.</li> <li>Describe in detail about the REST a software architecture style for distributed systems.</li> <li>What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.</li> <li>Summarize the virtualization for data center automation.</li> <li>Applying</li> <li>Applying</li> <li>Explain about REST in detail.</li> <li>Explain about REST in detail.</li> <li>Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.</li> <li>Discuss in detail about virtualization tools and mechanism.</li> <li>BTL1 Remembering</li> <li>BTL3 Applying</li> </ol>	1.	Describe in detail about SOA and Web services.	13	BTL3	Applying
<ol> <li>Explain the working of public subscribe model.</li> <li>Illustrate the Web services technologies stack with neat sketch.</li> <li>Explain what you understand the technologies that make up the core of today's web services.</li> <li>Describe in detail about the REST a software architecture style for distributed systems.</li> <li>What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.</li> <li>Summarize the virtualization for data center automation.</li> <li>Applying</li> <li>Applying</li> <li>Explain about REST in detail.</li> <li>Explain about REST in detail.</li> <li>Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.</li> <li>Discuss in detail about virtualization tools and mechanism.</li> <li>BTL3 Applying</li> <li>BTL3 Applying</li> <li>Applying</li> <li>BTL3 Applying</li> <li>BTL3 Applying</li> <li>BTL3 Applying</li> <li>BTL3 Applying</li> <li>BTL3 Applying</li> <li>BTL3 Applying</li> </ol>	2.	Describe in detail about characteristics of virtualized environments.	13	BTL3	
4. Illustrate the Web services technologies stack with neat sketch.  5. Explain what you understand the technologies that make up the core of today's web services.  6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  i) Explain about REST in detail.  i) Explain about REST in detail.  10. ii) Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL3 Applying  14. Applying  15. Applying  16. Applying  17. Remembering  18. Applying  18. Applying  19. Applying  10. Illustrate the migration steps and performance effects involved in  10. Illustrate the migration steps and performance effects involved in  11. BTL2 Understanding	3.	Explain the working of public subscribe model.	13	BTL1	
5. Explain what you understand the technologies that make up the core of today's web services.  6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  i) Explain about REST in detail.  ii) Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL3 Applying  14. Applying  15. Applying  16. Applying  17. Applying  18. Applying  18. Applying  19. Applying  19. Applying  10. Linderstanding  10. Illustrate the migration steps and performance effects involved in  10. Illustrate the migration steps and performance effects involved in	4.		13	BTL3	Applying
6. Describe in detail about the REST a software architecture style for distributed systems.  7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  i) Explain about REST in detail.  i) Explain about REST in detail.  7. In Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL3 Applying  14. Applying  15. Applying  16. Illustrate the migration steps and performance effects involved in  17. In Discussion detail about virtualization tools and mechanism.  18. BTL3 Applying  19. Applying  19. Applying  19. Applying  19. Applying  10. Illustrate the migration steps and performance effects involved in		Explain what you understand the technologies that make up the core of	13	BTL3	
7. What is virtualization? Describe about para and full virtualization architectures. Compare and contrast them.  8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL1 Remembering  14. Applying  15. Illustrate the migration steps and performance effects involved in  16. Illustrate the migration steps and performance effects involved in  17. BTL2 Understanding	6.	Describe in detail about the REST a software architecture style for	13	BTL3	Applying
8. Summarize the virtualization for data center automation.  9. Analyze the pros and cons of virtualization in detail.  10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL1 Remembering  14. Illustrate the migration steps and performance effects involved in  15. Inderstanding	7.	What is virtualization? Describe about para and full virtualization	13	BTL1	Remembering
9. Analyze the pros and cons of virtualization in detail.  i) Explain about REST in detail.  10. ii) Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL1 Remembering  14. Applying  15. Illustrate the migration steps and performance effects involved in  16. In the prosecution of the prosecution of the properties of the prosecution of the properties of the propert			12		
i) Explain about REST in detail.  10. ii) Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL3 Applying  14. Illustrate the migration steps and performance effects involved in  15. BTL2 Understanding					
10. ii)Discuss fast deployment, effective scheduling and high-performance virtual storage in detail.  11. Discuss in detail about the taxonomy of virtualization techniques.  12. Explain in detail about virtualization tools and mechanism.  13. BTL3 Applying  14. Illustrate the migration steps and performance effects involved in  15. Applying  16. Independing the property of the pr				BTL3	Applying
11.Discuss in detail about the taxonomy of virtualization techniques.13BTL1Remembering12.Explain in detail about virtualization tools and mechanism.13BTL3Applying13.Illustrate the migration steps and performance effects involved in13BTL2Understanding		ii)Discuss fast deployment, effective scheduling and high-performance		BTL3	Applying
12. Explain in detail about virtualization tools and mechanism.  13 BTL3 Applying  13 Illustrate the migration steps and performance effects involved in 13 BTL2 Understanding	11.	5		BTL1	Remembering
Illustrate the migration steps and performance effects involved in 13 BTL2 Understanding					
		Illustrate the migration steps and performance effects involved in			

14.	Analyze in detail about the implementation level of virtualization.	13	BTL4	Analyzing	
	-	13	DIL4	Analyzing	
15	What is the difference between recovery time objective and recovery point objective? How do they depend on each other? Justify your answer	13	PTI 2	Understanding	
13.	with appropriate examples.	13	DILL	Understanding	
16	Explain virtualization of CPU, Memory and I/O devices	13	BTL2	Understanding	
	Discuss in detail about the types of virtualizations.	13	BTL3	Applying	
17.	PART-C (15 -MARKS)	10	DIL	i i ppijing	
	Highlight the key points and identify the distinctions in different				
	approaches of virtualization levels. Discuss their relative advantages,				
1.	shortcomings and limitations. Also identify example systems	15	BTL4	Analyzing	
	implemented at each level				
_	Explain the technologies available for the design of application by		D		
2.	following Service Oriented Architecture (SOA).	15	BTL5	Evaluating	
	Explain the virtualization structure for				
3.	i)Hypervisor and Xen Architecture	15	BTL5	Evaluating	
3.	ii)Binary Translation with Full Virtualization	15	DILS	Evaluating	
	iii) Para-Virtualization with Compiler Support.				
4.	Give the importance of Virtualization Support and Disaster Recovery.	15	BTL6	Creating	
5.	Explain Virtualization at various implementation levels.	15	BTL5	Evaluating	
	UNIT III- CLOUD ARCHITECTURE, SERVICES AND ST				
	rered Cloud Architecture Design - NIST Cloud Computing Reference Ar				
	Hybrid Clouds - laaS - PaaS - SaaS - Architectural Design Challenges -	Clou	d Stora	ge – Storage-as-	
a-50	a-Service – Advantages of Cloud Storage – Cloud Storage Providers – S3				
	DADT A (2 MADKS)				
1	PART-A (2 - MARKS)		PTI 1	Domomhoring	
1.	Define public clouds.		BTL1	Remembering	
2.	Define public clouds. Write in brief on community cloud.		BTL1	Remembering	
2.	Define public clouds.  Write in brief on community cloud.  Define IaaS.		BTL1 BTL1	Remembering Remembering	
2. 3. 4.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?		BTL1 BTL1 BTL1	Remembering Remembering	
2. 3. 4. 5.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.		BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering	
2. 3. 4. 5. 6.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.		BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering	
2. 3. 4. 5. 6. 7.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?		BTL1 BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering	
2. 3. 4. 5. 6. 7. 8.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS		BTL1 BTL1 BTL1 BTL1 BTL1 BTL2	Remembering Remembering Remembering Remembering Understanding Understanding	
2. 3. 4. 5. 6. 7. 8. 9.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.		BTL1 BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2	Remembering Remembering Remembering Remembering Understanding Understanding Understanding	
2. 3. 4. 5. 6. 7. 8. 9. 10.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.  Identify the major players involved in cloud computing.		BTL1 BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding	
2. 3. 4. 5. 6. 7. 8. 9. 10.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.  Identify the major players involved in cloud computing.  Demonstrate the need of private cloud.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding Understanding	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.  Identify the major players involved in cloud computing.  Demonstrate the need of private cloud.  Show the interaction between the Actors in the cloud computing.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding Remembering Remembering	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.  Identify the major players involved in cloud computing.  Demonstrate the need of private cloud.  Show the interaction between the Actors in the cloud computing.  List out the characteristics of SaaS.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding Remembering Remembering Remembering	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.  Identify the major players involved in cloud computing.  Demonstrate the need of private cloud.  Show the interaction between the Actors in the cloud computing.  List out the characteristics of SaaS.  Why do we need cloud storage? Specify.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding Understanding Remembering Remembering Remembering	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.  Identify the major players involved in cloud computing.  Demonstrate the need of private cloud.  Show the interaction between the Actors in the cloud computing.  List out the characteristics of SaaS.  Why do we need cloud storage? Specify.  Analyze the storage as a service.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Remembering Remembering Understanding	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14.	Define public clouds.  Write in brief on community cloud.  Define IaaS.  State the types of clouds with proper examples?  Why do we need a hybrid cloud? Specify.  State the role of cloud auditor in cloud.  What are the different layers available in cloud architecture design?  Discuss any three features of IaaS  Differentiate cloud consumer and cloud provider.  Identify the major players involved in cloud computing.  Demonstrate the need of private cloud.  Show the interaction between the Actors in the cloud computing.  List out the characteristics of SaaS.  Why do we need cloud storage? Specify.  Analyze the storage as a service.  Point out major activities of cloud provider.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding Understanding Remembering Remembering Remembering Understanding Understanding	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16.	Define public clouds. Write in brief on community cloud. Define IaaS. State the types of clouds with proper examples? Why do we need a hybrid cloud? Specify. State the role of cloud auditor in cloud. What are the different layers available in cloud architecture design? Discuss any three features of IaaS Differentiate cloud consumer and cloud provider. Identify the major players involved in cloud computing. Demonstrate the need of private cloud. Show the interaction between the Actors in the cloud computing. List out the characteristics of SaaS. Why do we need cloud storage? Specify. Analyze the storage as a service. Point out major activities of cloud provider. Compare service aggregation and service arbitrage.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding Understanding Understanding Understanding Understanding Remembering Remembering Understanding Understanding Understanding	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17.	Define public clouds. Write in brief on community cloud. Define IaaS. State the types of clouds with proper examples? Why do we need a hybrid cloud? Specify. State the role of cloud auditor in cloud. What are the different layers available in cloud architecture design? Discuss any three features of IaaS Differentiate cloud consumer and cloud provider. Identify the major players involved in cloud computing. Demonstrate the need of private cloud. Show the interaction between the Actors in the cloud computing. List out the characteristics of SaaS. Why do we need cloud storage? Specify. Analyze the storage as a service. Point out major activities of cloud provider. Compare service aggregation and service arbitrage. Define cloud storage.		BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Remembering Remembering Remembering Remembering Understanding Remembering Remembering Remembering Understanding Understanding Remembering	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.	Define public clouds. Write in brief on community cloud. Define IaaS. State the types of clouds with proper examples? Why do we need a hybrid cloud? Specify. State the role of cloud auditor in cloud. What are the different layers available in cloud architecture design? Discuss any three features of IaaS Differentiate cloud consumer and cloud provider. Identify the major players involved in cloud computing. Demonstrate the need of private cloud. Show the interaction between the Actors in the cloud computing. List out the characteristics of SaaS. Why do we need cloud storage? Specify. Analyze the storage as a service. Point out major activities of cloud provider. Compare service aggregation and service arbitrage. Define cloud storage. Write down the services in IaaS.		BTL1 BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Remembering Remembering Remembering Remembering Remembering Understanding Remembering Remembering Remembering Understanding Remembering Remembering Remembering	
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.	Define public clouds. Write in brief on community cloud. Define IaaS. State the types of clouds with proper examples? Why do we need a hybrid cloud? Specify. State the role of cloud auditor in cloud. What are the different layers available in cloud architecture design? Discuss any three features of IaaS Differentiate cloud consumer and cloud provider. Identify the major players involved in cloud computing. Demonstrate the need of private cloud. Show the interaction between the Actors in the cloud computing. List out the characteristics of SaaS. Why do we need cloud storage? Specify. Analyze the storage as a service. Point out major activities of cloud provider. Compare service aggregation and service arbitrage. Define cloud storage.		BTL1 BTL1 BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1 BTL1	Remembering Remembering Remembering Remembering Remembering Understanding Understanding Understanding Understanding Understanding Remembering Remembering Understanding Remembering Remembering Remembering Understanding Understanding Understanding Remembering Remembering	

22.	List the entities involved in the cloud platform.		BTL1	Remembering	
23.	23. Mention the major actors involved in NIST reference model.		BTL1	Remembering	
24. What is service orchestration?			BTL2	Understanding	
	PART-B (13- MARKS)				
	List the cloud deployment models and give a detailed note about them.	13	BTL3	Applying	
	Discuss in detail about the categories of cloud computing.	13	BTL1	Remembering	
	Describe service and deployment models of a cloud computing environment with illustrations.	13	BTL3	Applying	
4.	Discuss about the Layered Cloud Architecture Design.	13	BTL3	Applying	
5.	Summarize about the NIST Cloud Computing Reference Architecture.	13	BTL1	Remembering	
6.	Discuss the Infrastructure-as-a-Service, Platform as a service and Software as a service.	13	BTL3	Applying	
	Discuss the features of software as a Service and explain in detail about SaaS with example.	13	BTL3	Applying	
8.	Briefly discuss the architectural design challenges of the cloud.	13	BTL3	Applying	
ı u	List and discuss the principles for designing public cloud, private cloud and hybrid cloud.	13	BTL3	Applying	
	i)Give the diagram for Cloud Computing Reference Architecture. ii)Illustrate in detail about The Conceptual Reference Model of cloud.	3 10	BTL3	Applying	
11.	Analyze the challenges in architectural design of cloud.	13	BTL4	Analyzing	
12.	Compare and Contrast: Public, Private and Hybrid clouds.	13	BTL4	Analyzing	
13.	Evaluate in detail about Cloud Storage and Storage-as-a-Service – with advantages of Cloud Storage.	13	BTL5	Evaluating	
14.	Explain with neat diagram about the Cloud Storage Providers and Amazon Simple Storage Service S3.	13	BTL6	Creating	
15.	Explain in detail the various challenges faced while designing Architecture.	13	BTL3	Applying	
16.	Describe in detail the community cloud and give its benefits.	13	BTL2	Understanding	
17.	Distinguish three principal layers: Physical infrastructure, Software management infrastructure and User interface.	13	BTL3	Applying	
	PART-C (15 -MARKS)				
1.	Explain about any one of the cloud storage providers.	15	BTL5	Evaluating	
2.	Evaluate and contrast the merits and demerit of Cloud deployment models: public, private, hybrid.	15	BTL5	Evaluating	
3.	Evaluate about the architectural design of compute and storage clouds.	15	BTL5	Evaluating	
4.	Explain the challenges in cloud architectural design.	15	BTL5	Evaluating	
5.	Under what circumstances should you prefer to use PaaS over IaaS? Formulate it with an example.	15	BTL5	Evaluating	
	UNIT IV- RESOURCE MANAGEMENT				
<b>T</b> 7 •				B. 4.	

Virtual Clusters and Resource Management – Physical versus Virtual Clusters – Live VM Migration steps and Performance Effects – Dynamic Deployment of Virtual Clusters - Inter Cloud Resource Management – Resource Provisioning and Resource Provisioning Methods – Global Exchange of Cloud Resources

<ol> <li>List the five application areas in SaaS applications.</li> <li>State the different Resource Provisioning Methods.</li> <li>List the cloud Differences in the perspectives of providers, vendors, and users.</li> <li>Differentiate over provisioning and under provisioning of resources with an example.</li> <li>Discuss the demand resource provisioning with example. (VMs)</li> <li>Give the diagram for evolution of cloud services.</li> <li>What are the security challenges in cloud computing?</li> <li>Demonstrate any two storage services of cloud system.</li> <li>Illustrate password assurance testing.</li> <li>BTL2 Und</li> <li>Define Intercloud.</li> <li>BTL1 Ren</li> </ol>	nembering nembering nembering lerstanding lerstanding lerstanding lerstanding lerstanding
3. State the different Resource Provisioning Methods.  4. List the cloud Differences in the perspectives of providers, vendors, and users.  5. Differentiate over provisioning and under provisioning of resources with an example.  6. Discuss the demand resource provisioning with example. (VMs)  7. Give the diagram for evolution of cloud services.  8. What are the security challenges in cloud computing?  9. Demonstrate any two storage services of cloud system.  10. Illustrate password assurance testing.  11. Define Intercloud.  BTL1 Ren  BTL2 Und  BTL2 Und  BTL2 Und  BTL2 Und	nembering lerstanding lerstanding lerstanding lerstanding lerstanding
4. List the cloud Differences in the perspectives of providers, vendors, and users.  5. Differentiate over provisioning and under provisioning of resources with an example.  6. Discuss the demand resource provisioning with example. (VMs)  7. Give the diagram for evolution of cloud services.  8. What are the security challenges in cloud computing?  9. Demonstrate any two storage services of cloud system.  10. Illustrate password assurance testing.  11. Define Intercloud.  BTL1 Ren	nembering lerstanding lerstanding lerstanding lerstanding lerstanding
4. users.  5. Differentiate over provisioning and under provisioning of resources with an example.  6. Discuss the demand resource provisioning with example. (VMs)  7. Give the diagram for evolution of cloud services.  8. What are the security challenges in cloud computing?  9. Demonstrate any two storage services of cloud system.  10. Illustrate password assurance testing.  11. Define Intercloud.  12. Und  13. BTL1 Ren	lerstanding lerstanding lerstanding lerstanding lerstanding
6. Discuss the demand resource provisioning with example. (VMs)  7. Give the diagram for evolution of cloud services.  8. What are the security challenges in cloud computing?  9. Demonstrate any two storage services of cloud system.  10. Illustrate password assurance testing.  11. Define Intercloud.  12. Und  13. BTL2 Und  14. BTL1 Ren	lerstanding lerstanding lerstanding lerstanding lerstanding
<ol> <li>Give the diagram for evolution of cloud services.</li> <li>What are the security challenges in cloud computing?</li> <li>Demonstrate any two storage services of cloud system.</li> <li>Illustrate password assurance testing.</li> <li>BTL2 Und</li> <li>Define Intercloud.</li> <li>BTL1 Ren</li> </ol>	lerstanding lerstanding lerstanding lerstanding
8. What are the security challenges in cloud computing? 9. Demonstrate any two storage services of cloud system. 10. Illustrate password assurance testing. 11. Define Intercloud. 12. BTL1 Ren	lerstanding lerstanding lerstanding
9. Demonstrate any two storage services of cloud system.  10. Illustrate password assurance testing.  11. Define Intercloud.  BTL2 Und BTL2 Und BTL1 Ren	lerstanding lerstanding
10.Illustrate password assurance testing.BTL2Und11.Define Intercloud.BTL1Ren	lerstanding
11. Define Intercloud.  BTL1 Ren	
	nembering
	<del></del>
12. What are the challenges of intercloud. BTL2 Und	lerstanding
13. What is Resource Provisioning in cloud?  BTL2 Und	
14. What are the types of resource provisioning methods.  BTL2 Und	lerstanding
15. What is Demand Driven resource provisioning.  BTL2 Und	lerstanding
	nembering
A •	lerstanding
	lerstanding
^ ^ V	nembering
	nembering
PART-B (13- MARKS)	nembering
	Applying
	lerstanding
	Applying
Describe the Interactions among VM managers for cloud creation	
	Applying
submit and control the VMs.	-FF-J8
	Applying
Examine about Extended Cloud Computing Services with neat block	1 .
6. diagram. 13 BTL3 A	Applying
Illustrate the following:	
7. i. Demand-Driven Resource Provisioning 5 BTL3 A	Applying
ii.Event-Driven Resource Provisioning	rbhramg
iii.Popularity-Driven Resource Provisioning	
	lerstanding
9. Illustrate Inter cloud architecture with a neat sketch. 13 BTL5 E	Evaluating
10. Describe in detail three types of statements are provided by SAML 13 BTL3 A	Applying

11. Explain in detail about cloud resource provisioning methods.	13	BTL3	Applying	
12. Relate physical clusters versus virtual clusters.	13	BTL4	Analyzing	
	13	DIL4	Anaryzing	
13. Illustrate the Live migration process of a VM from one host to another in detail with a neat sketch.	13	BTL3	Applying	
14. Discuss the Migration of Memory, Files, and Network Resources in detail.	13	BTL5	Evaluating	
15. Illustrate the live Migration of VM Using Xen with example.	13	BTL3	Applying	
16. Explain the Dynamic Deployment of Virtual Clusters with example.	13	BTL2	Understanding	
17. Illustrate the COD partitioning a physical cluster into multiple virtual clusters with example.	13	BTL3	Applying	
PART-C (15-MARKS)	•	l		
1. Discuss different ways for cloud service providers to maximize their revenues.	15	BTL5	Evaluating	
2. Write down where SaaS is extremely useful and not useful.	15	BTL5	Evaluating	
3. Discuss the three critical design issues of virtual clusters.	15	BTL5	Evaluating	
4. Illustrate in detail about the Resource Provisioning and Platform Deployment		BTL1	Remembering	
5. Discuss about different projects conducted at Purdue university.	15	BTL5	Evaluating	
UNIT V- SECURITY			<u>8</u>	
Security Overview – Cloud Security Challenges – Software-as-a-Service Security – Security Governance – Virtual Machine Security – IAM – Security Standards – Cloud Security and Trust Management  PART-A (2 -MARKS)				
Virtual Machine Security – IAM – Security Standards – Cloud Security and T PART-A (2 -MARKS)	Trust	Manag	ement	
<u> </u>	Frust	Manag BTL1	Remembering	
PART-A (2 -MARKS)	rust			
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?		BTL1	Remembering	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.		BTL1 BTL1	Remembering Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify		BTL1 BTL1 BTL2	Remembering Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.		BTL1 BTL1 BTL2 BTL2	Remembering Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.		BTL1 BTL1 BTL2 BTL2 BTL2	Remembering Remembering Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Understanding Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Understanding Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Understanding Understanding Understanding Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. 'Virtual machine is secured''. Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Understanding Understanding Understanding Understanding Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. 'Virtual machine is secured'. Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Understanding Understanding Understanding Understanding Understanding Understanding Understanding Understanding Remembering Remembering	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?  15. What is Data integrity?		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?  15. What is Data integrity?  16. List the security issues in cloud.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?  15. What is Data integrity?  16. List the security issues in cloud.  17. What is the baseline security practices for the SaaS environment.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Remembering Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?  15. What is Data integrity?  16. List the security issues in cloud.  17. What is the baseline security practices for the SaaS environment.  18. Define Secure Software Development Life Cycle (SecSDLC).		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Remembering Remembering Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?  15. What is Data integrity?  16. List the security issues in cloud.  17. What is the baseline security practices for the SaaS environment.  18. Define Secure Software Development Life Cycle (SecSDLC).  19. List phases of SecSDLC.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Remembering Remembering Understanding Understanding Understanding Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?  15. What is Data integrity?  16. List the security issues in cloud.  17. What is the baseline security practices for the SaaS environment.  18. Define Secure Software Development Life Cycle (SecSDLC).  19. List phases of SecSDLC.  20. What is Third-Party Risk Management.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Remembering Remembering Understanding Remembering Understanding Remembering Understanding	
PART-A (2 -MARKS)  1. What are the security challenges in cloud computing?  2. Define security governance.  3. In which three basic cloud security enforcements are expected? Clarify  4. Analyze the different security threats in implementing SAAS.  5. Examine whether the virtualization enhances cloud security.  6. Explain data privacy.  7. Identify the phases of Sec SDLC.  8. "Virtual machine is secured". Is it true? Justify your answer.  9. Generalize about the IAM.  10. Name the different Security Standards.  11. What is mutual authentication?  12. Why cloud environment needs SSL/TLS?  13. List the types of SAML queries.  14. What are the types of statements are provided by SAML?  15. What is Data integrity?  16. List the security issues in cloud.  17. What is the baseline security practices for the SaaS environment.  18. Define Secure Software Development Life Cycle (SecSDLC).  19. List phases of SecSDLC.		BTL1 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2 BTL2	Remembering Remembering Understanding Remembering Remembering Understanding Understanding Remembering Remembering Remembering Remembering	

24.	What is Identity Access Management.		BTL1	Remembering	
	PART-B (13 MARKS)				
1.	Discuss in detail about Software-as-a-Service Security.	13	BTL3	Applying	
2.	Show what is Cloud Security Defense Strategies with neat diagram.	13	BTL3	Applying	
- 4	What is the purpose of IAM? Describe its functional architecture with an illustration.	13	BTL4	Analyzing	
1 /1	Explain the Secure Software Development Life Cycle with neat diagram.	13	BTL5	Evaluating	
5.	Write short note on cloud security challenges.	13	BTL3	Applying	
6.	Write short notes on data security.	13	BTL3	Applying	
7.	Write short on Virtual machine security.	13	BTL3	Applying	
8.	Illustrate Secure Software Development Life Cycle (SecSDLC) in detail.	13	BTL4	Analyzing	
9.	<ul><li>(i) Discuss Data governance in detail.</li><li>(ii) Discuss Security Architecture design in detail.</li></ul>	6 7	BTL3	Applying	
10.	(ii) Application security	6 7	BTL3	Applying	
	Explain about IAM and physical security in SaaS.	13	BTL5	Evaluating	
	Demonstrate Security Assertion Markup Language (SAML) in security standards.	13	BTL3	Applying	
13.	Elaborate Open Authentication (OAuth) and OpenID in security standards.	13	BTL1	Remembering	
14.	Investigate about OpenID in security standards.	13	BTL2	Understanding	
15.	Explain about SSL/TLS in security standards.	13	BTL5	Evaluating	
16.	Discuss in detail about Cloud security defense strategies.	13	BTL3	Applying	
17.	Discuss about distributed intrusion or anomaly detection in detail.	13	BTL3	Applying	
	PART-C (15 MARKS)				
1.	Explain the security architecture design of a cloud environment and relate how it can be made possible to include such measures in a typical banking scenario.		BTL6	Creating	
2.	Evaluate the security governance and virtual machine security.	15	BTL5	Evaluating	
3.	Compare and Contrast the Key privacy issues in Cloud and explain the steps to overcome the issues with necessary examples.	15	BTL5	Evaluating	
4.	Describe the benefits of different cloud Security standards. (SAML OAuth, OpenID, SSL/TLS).	15	BTL6	Creating	
5.	Explain the cloud security challenges in detail.	15	BTL5	Evaluating	