INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad - 500 043

INFORMATION TECHNOLOGY

TUTORIAL QUESTION BANK

Course Name	:	**Cloud computing**
Course Code	:	**A60519**
Class	:	III B. Tech II Semester
Branch	:	Information Technology
Year	:	2017 – 2018
Course Faculty	:	Dr. A.Praveen, Associate Professor

OBJECTIVES

To meet the challenge of ensuring excellence in engineering education, the issue of quality needs to be addressed, debated and taken forward in a systematic manner. Accreditation is the principal means of quality assurance in higher education. The major emphasis of accreditation process is to measure the outcomes of the program that is being accredited.

In line with this, Faculty of Institute of Aeronautical Engineering, Hyderabad has taken a lead in incorporating philosophy of outcome based education in the process of problem solving and career development. So, all students of the institute should understand the depth and approach of course to be taught through this question bank, which will enhance learner's learning process.

TUTORIAL QUESTIONS

S. No.	Questions	Bloom's Taxonomy Level	Course Outcome
	UNIT – I		
	PART – A (SHORT ANSWER QUESTIONS)		
1	Define distributed systems	Remember	3
2	Write about parallel computing	Understand	3
3	Write about virtual machines	Understand	4
4	Define single system image	Remember	5
5	Write about resources sharing in clusters	Remember	5
6	Explain briefly about HTC	Understand	8
7	Write about middleware support for virtualization	Remember	6
8	Explain briefly about HPC	Understand	5
9	Write about virtual support at OS level	Remember	5
10	List the disadvantages of extending OS level	Understand	3
11	Explain about scalable computing trends and new paradigms	Remember	5
12	Explain in brief about Grid Computing Infrastructure	Understand	3
13	Write in brief about parallel and distributed programming models	Remember	5
14	Write in brief about energy efficiency in distributed computing	Understand	3
15	Explain in brief about Service Oriented Architecture.	Remember	5
	PART-B (LONGANSWER QUESTIONS)		
1	Write about distributed system models and enabling technologies	Remember	4
2	Explain in detail about system models and distributed cloud computing	Understand	3
4	Explain about Design Principles of Computer Clusters	Understand	2

5	List out the design principles of computer clusters	Remember	5
6	Explain about Computer Clusters and MPP Architectures	Understand	5
7	Write about technologies for network based system with suitable diagrams	Remember	6
8	Write about Virtual Clusters and Resource Management	Understand	1
9	Explain the virtualization structure/Tools and mechanisms	Understand	2
10	Explain about implementation levels of virtualization.	Remember	5
11	How virtualization is implemented for CPU, Memory and I/O devices?	Understand	1
12	How virtualization is used for Data-Center Automation	Understand	2
PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)			
1	What are the three computing paradigms for cloud computing	Understand	4
2	Draw a neat graph for hype cycle for emerging technologies	Remember	2
3	Sketch a three cloud service models in a cloud landscape of major providers	Understand	2
4	Explain in detail about evaluation of SOA	Remember	3
5	Explain in detail about evaluation of SOA	Understand	3
6	Explain about parallel and distributed programming models	Remember	1
7	Discuss GPU clusters for massive parallelism	Understand	2
8	Discuss about Tianhe-1A: The world fastest supercomputer in 2010	Remember	2
9	Discuss about Cray XT5 Jaguar: The Top supercomputer in 2009	Understand	2
10	Discuss about IBM Roadrunner: The Top supercomputer in 2008	Remember	3
UNIT – II			
PART – A (SHORT ANSWER QUESTIONS)			
1	Define cloud computing?	Understand	4
2	How does cloud computing provides on demand functionality?	Remember	5
3	Explain in brief about Cloud Infrastructure Management .	Understand	6
4	List out characteristics of cloud computing?	Remember	7
5	Define utility computing?	Understand	6
6	List out the features of cloud computing?	Remember	5
7	Define grid computing?	Understand	6
8	What is autonomic computing?	Remember	4
8	List the various challenges in cloud.	Understand	4
10	What is Boomi software?	Remember	5
11	Explain in brief about seven-Step Model of Migration into a Cloud	Understand	6
12	What are the various challenges of SaaS Paradigm	Remember	4
13	List out various SaaS Integration Services.	Understand	4
14	What are the various transition challenges for the enterprise cloud	Remember	5
15	List various issues for enterprise applications on the Cloud	Understand	5
PART-B (LONGANSWER QUESTIONS)			
1	What is cloud computing? Enlist and explain three service models, and four deployment models of cloud computing.	Understand	1
2	Explain the system models for distributed and cloud computing?	Remember	2
3	Explain the architecture of P2P system?	Understand	2
4	Explain architectural design of compute and storage clouds?	Remember	5
5	Explain the infrastructure of Grid computing in detail?	Understand	3
6	Explain any six benefits of Software as Service in Cloud computing?	Remember	4
7	Why is cloud called as eco system? justify	Understand	4
8	Difference between process virtual machines, host VMMs, native VMMs	Remember	3
9	Explain the importance of virtualization	Understand	1
10	“SOA as step forward cloud computing”, Explain?	Remember	2
11	Explain in detail about Businesses-to-Business Integration (B2Bi) Services.	Understand	
12	Explain in detail about SaaS Integration Products and Platforms.	Remember	3
PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)			
1	Explain cloud computing architecture and cloud components?	Understand	4
2	Explain the NIST reference architecture of cloud computing in detail?	Remember	2
3	Explain risk from multi tenancy environment. How IDS can be used in environment?	Understand	2
4	Discuss SAAS, PAAS and IAAS and compare them?	Remember	6

5	Explain Information and Data Model for Virtual machine.	Understand	5
6	How does cloud architecture overcome the difficulties faced by traditional architecture? What are the three differences that separate out cloud architecture from the tradition one?	Remember	4
7	Explain the infrastructure of Grid computing in detail?	Understand	3
8	Explain multithreading model in detail?	Remember	3
UNIT – III			
PART – A (SHORT ANSWER QUESTIONS)			
1	Define fault tolerance?	Understand	6
2	What is load balancing?	Remember	5
3	Explain in brief about public cloud and infrastructure services	Understand	6
4	Discuss in brief about Google app engine	Remember	5
5	Write in brief about Virtual Machine Migration Services	Understand	4
6	Draw a neat diagram for Open Nebula high level architecture	Remember	3
7	Explain about VM life cycle.	Remember	3
SECOND HALF			
8	Explain in brief about private cloud and infrastructure services	Remember	6
9	Write about Microsoft windows Azure	Understand	3
10	Define on demand service	Remember	3
11	Sketch the Aneka architecture	Remember	6
12	Draw the Comet Cloud Architecture.	Understand	3
13	List various CometCloud-based Applications	Remember	3
14	List various Dynamic ICT Services	Remember	3
PART-B (LONG ANSWER QUESTIONS)			
1	Explain in detail about RVWS design?	Understand	5
2	What are the various scheduling techniques for advance reservation of Capacity?	Remember	4
3	Explain the technologies for data security in cloud computing?	Understand	3
4	Discuss in detail the anatomy of cloud infrastructures	Remember	5
5	Explain the importance of quality and security in clouds?	Understand	4
6	Discuss in detail the logical design in enhancing cloud computing environment using cluster as a service	Remember	6
SECOND HALF			
7	Draw a neat sketch for architectural overview	Understand	3
8	Explain in detail about ANEKA cloud platform?		
9	Explain about ANEKA resource provisioning service?	Remember	3
10	Explain in detail about CometCloud Architecture	Understand	4
11	Discuss the Implementation and Evaluation of autonomic cloud engine	Remember	5
12	Explain about Architecture of Workflow Management Systems in cloud	Understand	4
13	Discuss the various SAGA-based Scientific Applications that Utilize Clouds	Remember	5
PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)			
1	Explain in detail about VM provisioning process	Understand	3
2	Sketch a neat diagram for a deployment scenario network with	Understand	4
3	Explain VM life cycle and VM monitoring	Understand	4
4	Write about infrastructure enabling technology	Remember	5
5	Write about RVWS design in detail	Understand	4
	List out the technologies for data security in cloud computing	Remember	5
SECOND HALF			
6	Explain in detail about automatic and selection process	Understand	6
7	Discuss in detail about Aneka Cloud Platform	Remember	2
8	Explain in detail about hybrid cloud implementation.	Understand	1
9	Discuss the Capacity Management to meet SLA Commitments.	Remember	4
UNIT – IV			
PART – A (SHORT ANSWER QUESTIONS)			

1	Write about federation	Understand	6
2	Define isolation	Remember	7
3	Explain in brief about the virtual execution environment manager	Understand	2
4	Sketch a neat diagram for hosting of applications on servers	Remember	5
5	Define federation scenarios	Understand	6
6	Draw a flow chart of the SLA management in cloud	Remember	4
7	Write about elasticity	Understand	4
8	Write about grid and cloud	Remember	3
9	Explain in brief about the virtual execution environment host	Understand	3
10	List out the technical benefits of cloud computing	Remember	2
PART-B (LONGANSWER QUESTIONS)			
1	Write about SAP systems in detail	Understand	3
2	List out the business benefits of cloud computing	Remember	4
3	List out the business benefits of cloud computing	Understand	3
4	Explain about SLA management in cloud	Remember	3
5	Explain about SLA management in cloud	Understand	2
6	Draw a neat sketch for automated policy based management with brief	Remember	3
7	Write about HPC systems and HPC on clouds	Understand	4
8	List out the technical benefits of cloud computing	Remember	4
9	Explain in detail about decouple your components	Understand	5
10	List out the technical benefits of cloud computing	Remember	5
11	Explain in detail about decouple your components	Understand	4
PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)			
1	List out the basic principles of cloud computing	Understand	2
2	Sketch a neat diagram for reservoir	Remember	2
3	Explain about security considerations	Understand	3
4	Write about automated policy based management	Remember	4
5	Explain about traditional approaches to SLO management	Understand	2
6	Write about amazon web services cloud	Remember	2
7	Draw a flow chart of the SLA management in cloud	Understand	3
8	Write about elasticity	Remember	4
UNIT – V			
PART – A (SHORT ANSWER QUESTIONS)			
1	List out the strengths of information cards	Understand	6
2	Draw a neat sketch of perception of quality	Remember	5
3	Distinguish direct versus indirect distribution	Understand	5
4	Write about cloud service life cycle	Remember	4
5	List out the weakness of information cards	Understand	5
6	Define service strategy	Remember	6
7	Write about acceptance testing	Understand	3
8	What is digital entity	Remember	4
9	Write about service design	Understand	6
10	What is data security	Remember	4
PART-B (LONGANSWER QUESTIONS)			
1	Explain about a framework to comprehend the competitive	Understand	3
2	Explain about digital identity and data security	Remember	3
3	Write about quality of service and value composition	Understand	2
4	Explain about common change management models(CMMM)	Remember	4
5	List out the cloud contracting models	Understand	3
6	List out the data privacy and security issues	Remember	5
7	Explain about management maturity model	Understand	4
8	Write about acceptance testing	Remember	3
PART – C (PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)			
1	Write about a need for cloud mashups	Understand	3
2	Write about cloud contracting models	Remember	2
3	Write about quality of service and value composition	Understand	5
4	Explain about common change management models(CMMM)	Remember	5

5	Explain about common change management models	Understand	4
6	Explain about a framework to comprehend the competitive environment	Remember	5

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