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Question Paper Code: AIT007



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

## MODEL QUESTION PAPER

B.Tech VII Semester End Examinations (Regular), November / December – 2018

**Regulations: IARE-R16**

**Cloud Computing**

(INFORMATION TECHNOLOGY)

**Time: 3 hours**

**Max. Marks: 70**

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Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

### UNIT – I

1. a) Discuss in detail about HPC and HTC? [7M]  
b) Explain the three VM architecture compared with the traditional physical machine with neat sketch. [7M]
  
2. a) Explain about data center virtualization for cloud computing. [7M]  
b) i. What are the different types of computing as service offered by cloud? [7M]  
ii. Discuss the various deployment models offered by clouds

### UNIT – II

3. a) Discuss in detail about Hypervisor architecture with a neat sketch. [7M]  
b) Discuss in detail about Xen Architecture with a neat sketch. [7M]
  
4. a) Explain the Live migration process of a VM from one host to another [7M]  
b) Write short notes on File System Migration, Smart Copying, Network Migration, Memory Migration [7M]

### UNIT – III

5. a) Explain the basic architecture of the types of clouds and their functionality with neat sketch [7M]  
b) Discuss in detail about Infrastructure-as-a-Service (IaaS) [7M]
  
6. a) Explain in detail about Amazon Web Services offerings. [7M]  
b) Discuss in detail about Inter-Cloud Resource Management [7M]

#### **UNIT – IV**

7. a) List and explain the business benefits of cloud computing [7M]  
b) Explain in detail about SLA management in cloud [7M]
8. a) Draw a neat sketch for automated policy based management with brief explanation. [7M]  
b) Write about HPC systems and HPC on clouds [7M]

#### **UNIT – V**

9. a) Explain about a framework to comprehend the competitive environment [7M]  
b) Explain about common change management models(CMMM) [7M]
10. a) Explain about digital identity and data security [7M]  
b) Discuss in detail about quality of service and value composition [7M]



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## COURSE OBJECTIVES:

The course should enable the students to:

I.	Understand the concepts of cloud computing for developing the cloud applications
II.	Understand task scheduling algorithms and virtualization
III.	Analyze the security issues in cloud environments
IV.	Gain knowledge in the broad perspective of cloud architecture and model
V.	Analyze and understand the importance of various applications of cloud computing

## COURSE OUTCOMES:

CO 1	Understand the concept of cloud computing and challenges
CO 2	Determine the cloud models with applications.
CO 3	Analyze an ability to identify and evaluate the requirements of software product
CO 4	Understand the cloud resource management and scheduling
CO 5	Understand security issues and solve by clearing risks with security

## COURSE LEARNING OUTCOMES:

Students, who complete the course, will have demonstrated the asking to do the following:

AIT007.01	Understand the cloud computing and related concepts
AIT007.02	Understand the key dimensions of the challenges of Cloud Computing
AIT007.03	Understand the cloud services of Amazon, Google, Azure online services.
AIT007.04	Develop the applications developments of Amazon web services
AIT007.05	Understand the Cloud architecture and programming model
AIT007.06	Describe the compute intensive model and data intensive model
AIT007.07	Determine the map reducing in cloud
AIT007.08	Describe the graph processing
AIT007.09	Determine programming models of pregl and other big data
AIT007.10	Understanding the cloud resource virtualization
AIT007.11	Describe the Emulation of CRV
AIT007.12	Determine the application virtualization, applying virtualization
AIT007.13	Understanding the Cloud Resource Management and Scheduling
AIT007.14	Determine cloud scheduling subject to deadlines
AIT007.15	Describe fairing with an example
AIT007.16	Understand the resource management and application scaling
AIT007.17	Describe the Cloud Security i.e., Risks, Privacy and Privacy impacts assessments
AIT007.18	Understand the Compliance issues
AIT007.19	Determine the how standards deal with cloud services and virtualization
AIT007.20	Describe compliance for the Cloud provider vs compliance for the customer.

**MAPPING OF SEMESTER END EXAMINATION TO COURSE LEARNING OUTCOMES:**

<b>SEE Question Number</b>		<b>COURSE LEARNING OUTCOME</b>	<b>CO</b>	<b>Blooms Taxonomy Level</b>
1	a	AIT007.01 Understand the cloud computing and related concepts	CO 1	Understand
	b	AIT007.02 Understand the key dimensions of the challenges of Cloud Computing	CO 1	Remember
2	a	AIT007.03 Understand the cloud services of Amazon, Google, Azure online services.	CO 1	Remember
	b	AIT007.04 Develop the applications developments of Amazon web services	CO 1	Understand
3	a	AIT007.08 Understand the Cloud architecture and programming model	CO 1	Remember
	b	AIT007.07 Describe the compute intensive model and data intensive model	CO 2	Remember
4	a	AIT007.08 Determine the map reducing in cloud	CO 2	Understand
	b	AIT007.10 Describe the graph processing	CO 2	Remember
5	a	AIT007.11 Determine programming models of MapReduce and other big data	CO 2	Remember
	b	AIT007.14 Understanding the cloud resource virtualization	CO 3	Understand
6	a	AIT007.15 Describe the Emulation of CRV	CO 3	Remember
	b	AIT007.13 Determine the application virtualization, applying virtualization	CO 4	Understand
7	a	AIT007.16 Understanding the Cloud Resource Management and Scheduling	CO 4	Remember
	b	AIT007.17 Determine cloud scheduling subject to deadlines	CO 4	Remember
8	a	AIT007.20 Describe fairing with an example	CO 5	Understand
	b	AIT007.18 Understand the resource management and application scaling	CO 5	Understand
9	a	AIT007.19 Describe the Cloud Security i.e., Risks, Privacy and Privacy impacts assessments	CO 5	Understand
	b	AIT007.20 Understand the Compliance issues in cloud computing	CO 5	Remember
10	a	AIT007.19 Determine the how standards deal with cloud services and virtualization	CO 5	Understand
	b	AIT007.19 Describe compliance for the Cloud provider vs compliance for the customer.	CO 5	Remember

**Prepared by:**  
Mr. A Praveen, Assistant Professor

**HOD, IT**