Hall Ticket No ☐☐☐☐☐☐☐☐☐☐   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**

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 the challenges of cloud computing. Explain in detail about cloud models with the help of a neat diagram.   **[7M]**
    b) Differentiate between Private cloud and Public cloud. Discuss in detail about the Grid computing with a suitable example.   **[7M]**

2. a) Elaborate the computing Cloud services. Discuss the Features of the Azure cloud platform with the help of a neat diagram.   **[7M]**
    b) Explain the Applications of cloud computing with suitable examples. Discuss in detail about the hybrid cloud.   **[7M]**

UNIT – II

3. a) Elaborate the Cloud Architecture with the help of a neat diagram. Explain the importance of public cloud.   **[7M]**
    b) Explain in detail about architectural styles of cloud applications; Outline the importance of NIST reference architecture.   **[7M]**

4. a) Differentiate between single, multi, hybrid cloud site with the help of a neat diagram. Discuss in detail about the 3 tier architecture.   **[7M]**
    b) Discuss in detail about the Compute and data intensive. Explain the importance of Programming model in cloud computing.   **[7M]**

UNIT – III

5. a) Discuss Cloud resource virtualization. Explain in detail about Basics of virtualization with a suitable example   **[7M]**
    b) Explain about types of virtualization techniques. Discuss various merits and demerits of virtualization.   **[7M]**

6. a) Differentiate between Full vs Para - virtualization? Discuss about virtual machine monitor/hypervisor.   **[7M]**
    b) Explain the importance of Virtual machine basics and discuss the taxonomy of virtual machines with a suitable example   **[7M]**

UNIT – IV

7. a) Explain the importance of Cloud Resource Management, Scheduling and discuss Policies and mechanisms for resource management **[7M]**

    b) Elaborate the resource bundling, combinatorial and debugging process with a suitable example. Explain start time fair queuing. **[7M]**

8. a) Discuss in detail about borrowed virtual time and cloud scheduling subject to deadlines with a suitable example. **[7M]**

    b) Elaborate the resource management with the help of a neat diagram Discuss in detail about the application scaling. **[7M]**

UNIT – V

9. a) Define Security. Discuss about Cloud Security and Multi-tenancy issues with an suitable example. **[7M]**

    b) Elaborate the Virtual security services provided VMM. Discuss in detail about virtualization system security issues and vulnerabilities **[7M]**

10. a) Explain the importance of Virtualization system-specific attacks. Discuss the Virtualization system **[7M]**

    b) Discuss the Technologies for virtualization-based security enhancement with a suitable example.. **[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 perceptive 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 date 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:

SEE Question Number			COURSE LEARNING OUTCOME	CO	Blooms Taxonomy Level
1	a	AIT007.01	Understand the cloud computing and related concepts	C0 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 date 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 pregl 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

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