Hall Ticket No | | | | | | | | | | |

Question Paper Code: AITB15

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal-500043, Hyderabad

B.Tech VII SEMESTER END EXAMINATIONS (REGULAR/SUPPLEMENTARY) - DECEMBER 2022
Regulation: R18

CLOUD COMPUTING

Time: 3 Hours **(INFORMATION TECHNOLOGY)** **Max Marks: 70**

Answer FIVE Questions choosing ONE question from each module
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

MODULE – I

1. (a) Discuss in detail on cloud multicore CPUs and multithreading technologies that present in distributed environment [BL: Understand| CO: 1|Marks: 7]

   (b) Identify the applications of high-performance and high throughput systems. Compare distributed computing with parallel computing and network computing [BL: Apply| CO: 1|Marks: 7]

2. (a) Illustrate the computer clusters for scalable parallel computing. How these security requirements are used in cloud service providers? [BL: Understand| CO: 1|Marks: 7]

   (b) Sketch and write notes on cluster architecture in distributed system model and briefly explain major cluster design issues. How hardware, software and middleware is supported in Cluster environment. [BL: Understand| CO: 1|Marks: 7]

MODULE – II

3. (a) With neat diagrams explain VM primitive operations. Summarize virtual storage mechanism and Xen architecture . [BL: Understand| CO: 2|Marks: 7]

   (b) Outline the problems in virtualizing in CPU, I/O and memory devices and suggest how it could be overridden for efficient utilization of cloud services. [BL: Apply| CO: 2|Marks: 7]

4. (a) Highlight the key points and identify the distinctions in different approaches of virtualization levels. Discuss their advantages and disadvantages with neat diagram [BL: Understand| CO: 2|Marks: 7]

   (b) Recall the types of virtualization and discuss in detail about the various techniques of virtualization. [BL: Understand| CO: 2|Marks: 7]

MODULE – III

5. (a) What are the enabling technologies for cloud. Explain about their requirements and discuss about how these technologies are benefited in the cloud platform. [BL: Understand| CO: 3|Marks: 7]

   (b) Enlist and explain three service models and four deployment models of cloud computing. [BL: Understand| CO: 3|Marks: 7]

6. (a) Mention various security risks occurs in data security. Write a short note on traditional approach to SLA management Explain any seven of them.
[BL: Understand| CO: 4|Marks: 7]

(b) Write in detail about service oriented architecture (SOA). Identify the characteristics and benefits of SOA. [BL: Understand| CO: 4|Marks: 7]

MODULE – IV

7. (a) Develop detailed steps to set the google app engine environment for executing any program of your choice [BL: Understand| CO: 5|Marks: 7]

(b) Outline the following

i) Amazon elastic compute cloud (EC2).

ii) Cluster as a service (CaaS). [BL: Understand| CO: 5|Marks: 7]

8. (a) Illustrate the architecture of IBM smart cloud with a neat architectural diagram.
[BL: Understand| CO: 5|Marks: 7]

(b) Construct GFS architecture in detail with neat diagram. Explain how data mutation takes place in GFS. [BL: Understand| CO: 5|Marks: 7]

MODULE – V

9. (a) Demonstrate in detail about cloud resource management (CRM) policies. Discuss about four mechanisms of implementation of CRM [BL: Understand| CO: 6|Marks: 7]

(b) Give a brief summary on various cloud services offered by salesforce. List the applications of control theory to cloud resource allocation. [BL: Understand| CO: 6|Marks: 7]

10. (a) Explain how cloud computing is different from outsourcing and provision of application service.
[BL: Understand| CO: 6|Marks: 7]

(b) Summarize threshold in cloud computing. Illustrate how feedback controls are based on Dynamic thresholds [BL: Understand| CO: 6|Marks: 7]

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