Hall Ticket No ☐☐☐☐☐☐☐☐☐☐   Question Paper Code: ACSB17

INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
Dundigal-500043, Hyderabad

B.Tech VII SEMESTER END EXAMINATIONS (REGULAR/SUPPLEMENTARY) - DECEMBER 2022
Regulation: R18
CLOUD APPLICATIONS AND DEVELOPMENT
Time: 3 Hours   **(COMPUTER SCIENCE AND ENGINEERING)**   **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) List some characteristics of cloud computing. Explain in detail about network-centric computing and network-centric content.   [BL: Understand| CO: 1|Marks: 7]

   (b) Illustrate the applications of cloud in healthcare and education sectors with suitable examples.
        [BL: Apply| CO: 1|Marks: 7]

2. (a) What are the features of amazon cloud platform? Show the same with the help of a sketch.
        [BL: Understand| CO: 1|Marks: 7]

   (b) Interpret the term cloud. Describe in detail about private cloud, community cloud, public cloud,and hybrid cloud.   [BL: Apply| CO: 1|Marks: 7]

MODULE – II

3. (a) Write about redundant and non redundant systems in cloud computing. List out different architectural styles of cloud applications using prompt examples.
        [BL: Understand| CO: 2|Marks: 7]

   (b) What is the business benefits involved in cloud architecture? Differentiate 3-tier and multi-tier architecture with the help of a diagram.   [BL: Understand| CO: 2|Marks: 7]

4. (a) Explain about the cloud computing infrastructure for data intensive applications with an example.
        [BL: Understand| CO: 2|Marks: 7]

   (b) Discuss the importance of public cloud with a real-world example and discuss data intensive programming model.   [BL: Understand| CO: 2|Marks: 7]

MODULE – III

5. (a) Describe in detail about of basics of virtualization with relevant example. Compare process and system virtual machines.   [BL: Understand| CO: 3|Marks: 7]

   (b) Elucidate the terms multiplexing, aggregation, emulation with respect to virtualization with ample real time examples to each term.   [BL: Apply| CO: 3|Marks: 7]

6. (a) Summarize layering and virtualization with a neat sketch. Categorize the merits and demerits of virtualization. [BL: Understand| CO: 4|Marks: 7]

    (b) Mention different types of virtualization techniques. Discuss the taxonomy of virtual machines with a suitable example. [BL: Understand| CO: 4|Marks: 7]

MODULE – IV

7. (a) List out the scheduling policies. Discuss about scheduling algorithms for computing clouds.
    [BL: Understand| CO: 5|Marks: 7]

    (b) Demonstrate borrowed virtual time and cloud scheduling subject to deadlines with a suitable example.
    [BL: Understand| CO: 5|Marks: 7]

8. (a) How resource management will affect the cloud? Explain ASCA combinatorial auction algorithm.
    [BL: Understand| CO: 5|Marks: 7]

    (b) Write note on resource management and dynamic application scaling. Explain about resource management with their applications and illustration. [BL: Understand| CO: 5|Marks: 7]

MODULE – V

9. (a) What are multi-tenancy issues? Discuss in detail about virtualization system security issues and vulnerabilities. [BL: Understand| CO: 6|Marks: 7]

    (b) Discuss about cloud security and multi-tenancy issues. How standards deal with cloud services and virtualization? [BL: Understand| CO: 6|Marks: 7]

10. (a) Summarize about cloud security. Elucidate technologies for virtualization-based security enhancement with example. [BL: Understand| CO: 6|Marks: 7]

    (b) Classify various virtualization system-specific attacks. Explain about data loss or leakage and account or service hijacking in detail. [BL: Understand| CO: 6|Marks: 7]

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