Name:.....
Roll No:.....

MAR ATHANASIUS COLLEGE OF ENGINEERING (AUTONOMOUS),

KOTHAMANGALAM - 686666

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B.TECH SECOND SERIES EXAMINATION, OCTOBER 2026 (S7 DS)

CDT 401 CONCEPTS IN CLOUD COMPUTING

Max. Marks: 40 Duration: 1.5 Hours

PART A

Answer all questions. Each question carries 3 marks.

1. Online ticket and token booking applications experience huge variation in customer traffic depending upon the time of the day(Eg: Tatkal booking time in the morning). What kind of cloud resource provisioning is suitable for such situations? Explain.
2. List any three Infrastructure-as-a-Service (IaaS) services from major cloud service providers.
3. A small startup is developing a new web application and is working remotely due to a pandemic. Suggest cloud-based applications they can use for planning, collaboration, task management, and scheduling
4. Comment on the Map-Reduce framework. What is it used for?

PART B

Answer all questions. Each question carries 14 marks.

5. (a) Discuss about the Layered cloud architectural design with the help of a diagram. (7 marks)

   (b) With the help of a diagram, explain the architecture of Eucalyptus. Write the functions of each of the components. (7 marks)

6. (a) For a dataset containing product sales, write Pig Latin queries to:
   i. Select records with sales above Rs. 10,000/-.
   ii. Calculate total sales per region.
   iii. Combine sales data with product information.
   iv. Sort the records by total sales in descending order. (8 marks)

   (b) Imagine you are organizing an online coding competition. Discuss the various ways you can utilize cloud resources to conduct the event smoothly and effectively. (6 marks)

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