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Total No. of Questions : 5]

SEAT No. :

PE-4211

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M.C.A. (Management)

CAS-610-MJ: CLOUD API's AND SERVICES

(2024 Pattern) (Semester - III)

Time : 2½ Hours] *[Max. Marks : 50*

Instructions to the candidates :

1) *All questions are compulsory.*
2) *All questions carry equal marks.*

Q1) a) Explain the role of cloud API's in cloud computing with suitable examples. [5]

b) Explain the benefits of cloud API's [5]

OR

c) Describe the stages of API's lifecycle management process. [5]

d) What are GraphQL and SOAP API's with example. [5]

Q2) a) Illustrate cloud API development using Azure functions with example. [5]

b) Compare different API security mechanisms and discuss best practices to protect API's [5]

OR

c) Describe the working of OAuth 2.0,JWT and API keys. [5]

d) Describe the features of JMeter and its role in API testing. [5]

Q3) a) Explain how AI and ML services are provided in the cloud by Google cloud. [5]

b) Compare AWS recognition and Azure computer vision in terms of Features and Applications [5]

OR

c) Describe the features of Google Natural Language API with examples. [5]

d) How do speech recognition and synthesis API's such as AWS polly and Google Speech-to- Text work. [5]

P.T.O.

Q4) a) Discuss security challenges of cloud API's and their impact on cloud-based applications. **[5]**

b) Explain event-driven programming in the cloud with reference to Azure Event Grid. **[5]**

OR

c) Explain serverless databases like firebase and DynamoDB. **[5]**

d) Compare Monolithic and Microservices Architectures. **[5]**

Q5) a) Discuss how cloud API's are used in healthcare systems for data sharing and patient services. **[5]**

b) Discuss the future of cloud API's with respect to automation and AI-driven development. **[5]**

OR

c) Solve the following case study :

ShopEase, a fast-growing e-commerce company, wanted to improve customer engagement and sales through real-time personalization. The management realized that customer review and browsing history could be used to offer better product recommendations and targeted offers, but they lacked the infrastructure to process and analyze this data efficiently.

Questions:

i) The main challenges faced by Shop Ease were related to scalability, data processing and response time. **[5]**

ii) Another major challenges was integrating artificial intelligence models with the existing API infrastructure while ensuring the privacy of user data and compliance with security regulations. **[5]**