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(AY:2025-26) December 2025 (ENDSEM) EXAM

TY/ (SEMESTER - I)

COURSE NAME: Cloud Computing Branch: CSE-DS COURSE CODE: CD31234A

(T.Y (Pattern 2023))

Time: [1Hr 30 Min]

[Max. Marks: 40]

(\*) Instructions to candidates:

- 1) Figures to the right indicate full marks. Use of scientific calculator is allowed
- 2) Use suitable data wherever required
- 3) All questions are compulsory. Solve any two sub question each from Questions 1 and 2
- 4) Solve any one sub question (2 marks) from Questions 3 ,4 ,5 and 6 and sub question of 4 marks is compulsory from questions 3,4,5, and 6

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Explain how data flows through the OSI model from sender to receiver.	[4]	CO1	Understand
	b) Develop a script that checks whether a number is even or odd using arithmetic and if conditions.	[4]	CO1	Apply
	c) Explain elasticity and scalability in cloud computing	[4]	CO1	Understand
Q.2	a) Explain how to set a budget in AWS and why it is important	[4]	CO2	Understand
	b) How do you create and configure access keys for AWS CLI?	[4]	CO2	Apply
	c) Explain at least three best practices for securing an AWS account	[4]	CO2	Understand
Q.3	a) Explain how to install and set up Docker Engine on Linux or Windows <i>OR</i>	[2]	CO3	Understand
	b) Discuss how Kubernetes manages application lifecycle including updates and rollbacks.	[2]	CO3	Understand
	c) Explain how Kubernetes schedules pods to nodes	[4]	CO3	Understand
Q.4	a) Describe the key stages of a CI/CD pipeline <i>OR</i>	[2]	C04	Apply
	b) Explain the use of the following commands: git clone, git commit, git push, git pull	[2]	CO4	Understand
	c) Explain at least three popular CI/CD tools and their use cases.	[4]	CO4	Understand

Q.5	a) What are IAM policies, and how do they control access in AWS? <i>OR</i>	[2]	CO5	Understand
	b) Explain the purpose and implementation of MFA (Multi-Factor Authentication) in AWS.	[2]	C05	Understand
	c) Apply AWS KMS to encrypt data stored in S3 and RDS	[4]	CO5	Apply
Q.6	a) Describe the 12-factor app methodology and its importance in cloud-native design. <i>OR</i>	[2]	C06	Understand
	b) Explain how AWS Outposts and Azure Stack enable hybrid cloud strategies.	[2]	C06	Understand
	c) Use Azure ML to train and deploy a simple machine learning model.	[4]	C06	Apply