



**K. K. Wagh Institute of Engineering Education & Research, Nashik**  
(An Autonomous Institute From A. Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:VI
Class:TY	Program:B.Tech
Branch Code:ROB	Pattern:2022
Name of Course:Cloud Computing	Course Code:ROB223014(D)
Max. Marks:60	Duration:2.30 Hrs.

**Instructions:** Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 01 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

**Marks CO**

**Question No. 1**

- 1a) Discuss the Cloud Computing abstraction features and discuss Hybrid cloud deployment model. (6) CO1

**Question No. 2**

- 2a) Explain the Characteristics, benefits, applications of Software as a service (SaaS) cloud service models with example (6) CO2

**Question No. 3**

- 3a) Explain the concept of virtualization and how it helps optimize resource utilization in IT infrastructures. (8) CO4

**OR**

- 3b) What is operating system virtualization, and how does it enable multiple OS environments to run on a single physical machine? (8) CO3

- 3c) Discuss the various methods used to implement storage virtualization. How does storage virtualization help in improving storage management and flexibility? (8) CO4

**OR**

- 3d) What is virtual clustering, and how does it improve the performance and scalability of virtualized environments? Discuss its applications in large-scale enterprise environments (8) CO3

**Question No. 4**

- 4a) Describe a Cloud Provider's activities and explain the sharing and control of computing resources among IaaS, SaaS and PaaS Cloud Consumers. (8) CO4

**OR**

- 4b) Explain the Cloud Service Management includes all of the service-related functions that are necessary for the management and operation of those services required by or proposed to cloud consumers. (8) CO4

- 4c) Draw cloud taxonomy and explain cloud computing reference architecture. (8) CO4

**OR**

- 4d) Explain the cloud privacy and discuss shared security responsibilities in a cloud system between the Cloud Provider and the Cloud Consumer. (8) CO4

**Question No. 5**

- 5a) Explain the Google App Engine Compute Services life cycle. (8) CO4

**OR**

- 5b) Explain the role of compute services, such as AWS EC2, in cloud application development. How do these services facilitate the provisioning, scaling, and management of computing resources? (8) CO4

- 5c) Explain the Google Service Oriented Architecture (SOA) characteristics and fundamental components. (8) CO5

**OR**

- 5d) Discuss operation and characteristics of OpenStack and Trystack cloud operating system. (8) CO5

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