

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2026
(Sixth Semester)
Branch – INFORMATION TECHNOLOGY

CLOUD COMPUTING & SERVICES

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Cloud computing is best defined as _____. (i) Local data storage (ii) Internet based computing services (iii) Standalone system (iv) Manual Computing	K1	CO1
	2	Which option best explains scalability in cloud computing? (i) Fixed resources (ii) Ability to increase/decrease resources (iii) Data deletion (iv) Manual control	K2	CO1
2	3	Which of the following is a characteristic of cloud computing? (i) Limited scalability (ii) On-demand self-service (iii) Offline processing (iv) Fixed storage	K1	CO2
	4	Elasticity differs from scalability because it _____. (i) Stores data (ii) Automatically adjusts resources dynamically (iii) Deletes resources (iv) Secures systems	K2	CO2
3	5	Which cloud model provides shared resources over the internet? (i) Private cloud (ii) Public cloud (iii) Hybrid cloud (iv) Community cloud	K1	CO3
	6	Which service is best for running virtual machines? (i) Amazon S3 (ii) Google Compute Engine (iii) Cloud SQL (iv) DynamoDB	K2	CO3
4	7	Virtualization refers to _____. (i) Physical storage (ii) Creating virtual versions of resources (iii) Data deletion (iv) Network failure	K1	CO4
	8	Which database is non-relational? (i) MySQL (ii) Oracle (iii) DynamoDB (iv) SQL Server	K2	CO4
5	9	Which service model provides hardware resources? (i) SaaS (ii) PaaS (iii) IaaS (iv) DaaS	K1	CO5
	10	Content Delivery Networks (CDN) are used to _____. (i) Store databases (ii) Deliver content faster to users (iii) Manage users (iv) Process data	K2	CO5

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SECTION - B (35 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Define Cloud Computing. List its key characteristics.	K1	CO1
		(OR)		
	11.b.	List and briefly define the different cloud service models.		
2	12.a.	Explain the working of virtualization in cloud computing.	K2	CO2
		(OR)		
	12.b.	Explain the role of Amazon EC2, Google Compute Engine, and Azure Virtual Machines.		
3	13.a.	Illustrate how a website can use Amazon CloudFront or Azure CDN to deliver content efficiently to global users.	K3	CO3
		(OR)		
	13.b.	Illustrate how Google BigQuery can be used to analyze large-scale data in a real-time scenario.		
4	14.a.	Apply the concept of scalability in an e-commerce website scenario.	K3	CO4
		(OR)		
	14.b.	Show how NoSQL databases can be used in handling large-scale data.		
5	15.a.	Analyze the role of cloud computing in Healthcare systems with respect to data storage, accessibility, and security.	K3	CO5
		(OR)		
	15.b.	Analyze the impact of cloud computing on Transportation systems in terms of real-time data processing and traffic management.		

SECTION - C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Define MapReduce. List its components and working steps.	K1	CO1
2	17	Summarize the differences between relational and non-relational database services in the cloud.	K2	CO2
3	18	Apply Amazon Elastic MapReduce (EMR) for processing large-scale data with a suitable scenario.	K3	CO3
4	19	Analyze the key design considerations for cloud applications such as scalability, reliability, security, and performance.	K3	CO4
5	20	Design a cloud-based healthcare system for storing and accessing patient records with proper security and accessibility features.	K3	CO5

Z-Z-Z

END