BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION MO/2022)

CLASS: B. TECH. **SEMESTER : 5TH**
BRANCH: CSE &IT **SESSION : MO/2022**

SUBJECT: IT322 CLOUD COMPUTING

TIME: 03 HOURS **FULL MARKS: 50**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4*. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates**

Q.1(a)	Explain the significance of resource pooling in cloud computing. Enlist different types of resource pools.	**CO1**	**BL4**	[2]
Q.1(b)	Identify the important characteristics of the cloud computing service model. Mention the challenges of migrating to cloud.	**CO1**	**BL2**	[3]
Q.1(c)	Define service-orientation and demonstrate its basic principles with respect to cloud computing. Mention the importance of Quality of Service (QoS) in cloud service delivery model.	**CO1**	**BL3**	[5]
Q.2(a)	Identify the reasons that led to the emergence of parallel processing as a computing alternative.	**CO1**	**BL2**	[2]
Q.2(b)	Define distributed system, and using an appropriate illustration explain layered view of its components.	**CO1**	**BL1, BL4**	[3]
Q.2(c)	Define an architectural style and explain how the performance of distributed systems is affected by various architectural styles.	CO1	**BL1, BL4**	[5]
Q.3(a)	Demonstrate the significance of virtualization techniques in cloud service delivery.	**CO2**	**BL3**	[2]
Q.3(b)	With a suitable illustration of hardware virtualization reference model give a discussion on hardware level virtualization.	**CO2**	**BL2, BL3**	[3]
Q.3(c)	Give a detailed comparison between DAS, NAS, and SAN in the context of storage area virtualization.	**CO2**	**BL5**	[5]
Q.4(a)	Summarize the essential characteristics that identify a Platform-as-a-Service solution.	**CO2, CO3**	**BL2**	[2]
Q.4(b)	Demonstrate the different components of Infrastructure-as-a-Service using its reference implementation diagram.	**CO2, CO3**	**BL3**	[3]
Q.4(c)	Explain with an appropriate example how cloud computing reduces the time required to bring applications to market and lowers capital expenditures.	**CO2, CO3**	**BL4**	[5]
Q.5(a)	Describe any one scientific application of cloud computing.	**CO4**	**BL1**	[2]
Q.5(b)	Discuss the runtime environment-based services offered by Google AppEngine.	**CO4**	**BL2**	[3]
Q.5(c)	Give a detailed discussion on the key offerings of Amazon Web Services with respect to compute, storage, and communication.	**CO4**	**BL2**	[5]

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