

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: MTECH  
BRANCH: CSE**

**SEMESTER: I  
SESSION: MO/2023**

**SUBJECT: CS536 CLOUD COMPUTING**

**TIME: 3 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. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
- 

		CO	BL
Q.1(a)	Define Cloud computing and identify its core features. Examine the principle of on-demand resource provisioning in the context of cloud computing versus conventional computing.	[5] 1	4
Q.1(b)	What is utility-oriented computing? Elaborate on how utility-oriented computing contributes towards resource scalability and flexibility.	[5] 1	6
Q.2(a)	Illustrate how parallelism enhances the efficiency in computing systems. Describe the different levels of parallelism that a computing system is capable of accomplishing.	[5] 2	2
Q.2(b)	Explain the significance of inter-process communication (IPC) with respect to distributed systems. Discuss how remote procedural call (RPC) enables inter-process communication.	[5] 2	6
Q.3(a)	Using a suitable block diagram, illustrate the major components of a virtualization reference model. Enumerate the significant characteristics that define a virtualized environment.	[5] 3	6
Q.3(b)	Evaluate the role of storage virtualization in improving storage resource utilization. Assess the benefits of storage-area-network (SAN) over other conventional storage architectures in response to changing storage requirements.	[5] 3	5
Q.4(a)	Demonstrate, using an appropriate block diagram, how a cloud computing reference model furnishes a conceptual framework for comprehending cloud computing. Enumerate the roles and functions of the Infrastructure as a Service (IaaS) layer in a cloud computing reference model.	[5] 4	2
Q.4(b)	What is a cloud deployment model? Examine the considerations that organizations should explore while selecting a specific cloud deployment model.	[5] 4	4
Q.5(a)	Using a suitable block diagram demonstrate the complete architectural overview of the Aneka cloud application platform.	[5] 5	2
Q.5(b)	Summarize the relationship between a process and a thread. What is multi-threading and how does it relate to multi-tasking?	[5] 5	2

:::24/11/2023 E:::