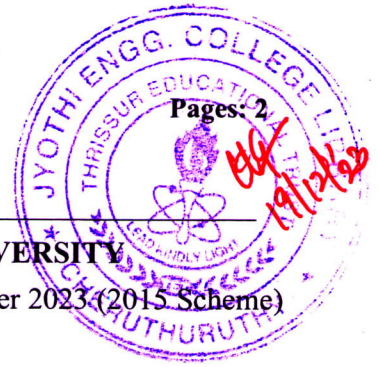


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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S7 (S, FE) / S7 (PT) (S, FE) Examination December 2023 (2015 Scheme)

Course Code: CS407

Course Name: DISTRIBUTED COMPUTING

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 4 marks.

		Marks
1	Explain any four features that characterize the distributed system.	4
2	Distinguish between loosely coupled and tightly coupled systems.	4
3	Define mobile agents.	4
4	What is the importance of sockets in the communication system?	4
5	Explain the purpose of marshalling in DS.	4
6	What do you mean by flat file service in DFS?	4
7	Explain concurrency control in a distributed environment.	4
8	What is serializability in concurrency control?	4
9	What is mutual exclusion? Why it is needed in a distributed environment?	4
10	Is the election algorithm an effective way to select a master? Justify your answer.	4

PART B

Answer any two full questions, each carries 9 marks.

11	a) Discuss the issues while implementing a workstation model and give solutions for each.	9
12	a) How can we use proxy servers and caches in the architecture model? Explain.	9
13	a) Analyze the security risks in an interaction model.	4
	b) Explain the significance of transparency in a distributed system.	5

PART C

Answer any two full questions, each carries 9 marks.

14	a) How can we use IP multicast in group communication? Explain	9
15	a) How can API be used for data communication? Explain	9
16	a) How the Unix file system is used to implement a DFS?	4
	b) What factors should be considered, when client integration is done?	5

PART D

Answer any two full questions, each carries 12 marks.

- 17 a) Explain issues that must be addressed when concurrent transactions take place. 12
- 18 a) Explain Maekawa's voting algorithm. 12
- 19 a) Discuss the Deadlock situations in concurrent transactions. 6
- b) Explain the centre server algorithm. 6
