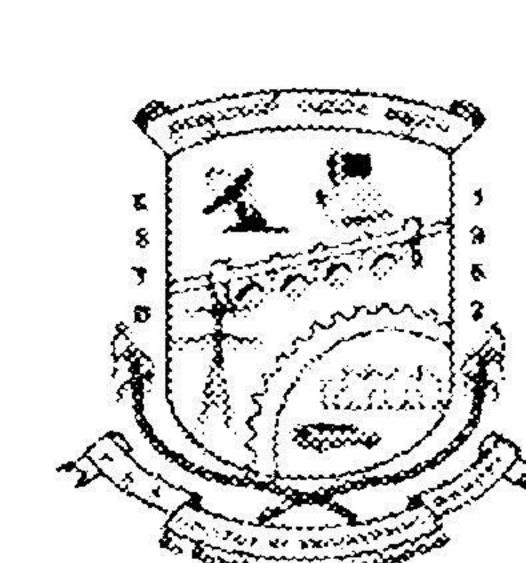
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## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester, B.E. - Information Science and Engineering Semester End Examination; Aug. / Sep. - 2020

Distributed Systems Max. Marks: 100 Time: 3 hrs Note: i) Answer TWO full questions, selecting ONE full question from UNIT - I and UNIT - II. ii) Answer any THREE full questions, choosing from UNIT - III, UNIT - IV and UNIT - V. UNIT - I 1 a. Construct a model illustrating spontaneous networking in a hospital referring to its key features. b. Distinguish between synchronous and asynchronous distributed systems. OR 2 a. Outline and describe various characteristics of interprocess communication. b. Explain TCP stream communication and address any two issues associated with stream communication. UNIT - II 3 a. List by briefing various methods involved in object model. b. Construct a table to address various design issues of RMI. OR Outline the various distributed file system requirements. b. Design a processing model describing distribution of process in Andrew file system. UNIT - III Explain how messages are exchanged between a pair of NTP Peers? b. Identify various detecting global properties of global states. 6 a. Explain the 'snapshot' algorithm of Chandy and Lamport. b. Determine the state of reach ability between states in 'snapshot' algorithm. UNIT - IV 7 a. Construct tables for the following: i) The Lost update problem ii) Serially equivalent interleaving of two transactions b. Summarize the drawbacks of locking in optimizing concurrency control. 8 a. Design a model for distributed banking transaction referring to nested file transaction. 10

b. Explain the operations of two phase commit protocol.

## UNIT - V

9 a.	Explain the methods of attack classified according to way in which a channel is misused.	10
b.	Distinguish between symmetric and asymmetric algorithms.	1 (
10 a.	Construct an architectural model for management of replicated data.	1 (
b.	List and brief various sequences of events for a client request operation.	1 (

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2-9-2020