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Reg. No.:			,			·	 _			

Question Paper Code: 60383

B.E./B.Tech. DEGREE EXAMINATION. NOVEMBER/DECEMBER 2016

Fourth Semester

Computer Science and Engineering

CS 2255/CS 46/CS 1254/080250009/10144 CS 406 — DATABASE MANAGEMENT SYSTEMS

(Common to Information Technology)

(Regulations 2008/2010)

(Common to PTCS 2255/10144 CS 406 — Database Management Systems for B.E. (Part-Time) Third Semester — Computer Science and Engineering, Regulations 2009/2010)

Time: Three hours

Maximum: 100 marks

Answer ALL questions.

$$PART A - (10 \times 2 = 20 \text{ marks})$$

- 1. What is the purpose of Data base System?
- 2. In what way Database users can be differentiated?
- 3. List out any two keys.
- 4. Give the difference between ODBC and JDBC.
- 5. How good is BCNF?
- 6. Define Non-loss decomposition.
- 7. Define save point.
- 8. Define ACID properties.
- 9. Define RAID.
- 10. Write a short note on Database tuning.

PART B —
$$(5 \times 16 = 80 \text{ marks})$$

11. (a) With a suitable neat diagram, explain the database system Architecture.

 \mathbf{Or}

(b) Compare and contrast various data models.

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•	12.	(a)	Explain the:
•			(i) Six basic operators in Relational Algebra. (8)
		-	(ii) Triggers. (8)
•		<u>.</u>	\mathbf{Or}
•		(b)	Discuss about:
	-	•	(i) Aggregate function and Outer join. (8)
•			(ii) Distributed databases and client server databases. (8)
	13.	(a)	Explain Join Dependencies and fifth normal form. Provide examples.
			\mathbf{Or}
		(b)	Explain First, Second and Third normal forms. Provide examples.
	14.	(a)	Write down any three recovery techniques in Transaction Management.
		•	\cdot Or
		(b)	Discuss about Locking and Concurrency problem. Also write a note on locking protocols.
	15 .	(a)	Explain Static and Dynamic Hashing techniques.
			\mathbf{Or}
		(b)	Describe in detail B and B+ tree Index files.