GANPAT UNIVERSITY

B. Tech. Semester - IV (Computer Engineering/Information Technology)
Regular Examination May - 2014
2CE405/2IT405: Database Management System- II

Time: 3 Hours]

[Total Marks: 70

Instructions:

1. Figures to the right indicate full marks.
2. Attempt each section in a separate answer book.
3. Be precise and to the point in your answer.

SECTION-I

Q-1	[A]	What is Transaction? Explain with example the importance of maintaining ACID property of transaction.	[9]
	[B]	What is schedule? Discuss concurrent schedule with example.	[3]

OR

Q-1	[A]	What is conflict and view serializable schedule? List possible rules to state given two instructions are conflicting and non conflicting instructions. State the procedure to find conflict serializable schedule.	[9]
	[B]	Discuss how the database system deals with transaction failure and system failure in shadow copy scheme.	[3]

Q-2	[A]	Define following terms	[6]
		1. Checkpoints	
		2. Location transparency.	
		3. Data base graph	
		4. Cascade less schedule	
		5. Shared and intension ex-mode	
		6. Lock conversion.	
	[B]	Draw a simple schematic of data access operation with read/write and input/output operations. Discuss each operation in brief.	[5]

OR

Q-2	[A]	Discuss distributed database system.	[6]
	[B]	Write a complete syntax to create data base trigger and explain the meaning of each keyword.	[5]

Q-3	[A]	List only rules of following protocols	[10]
		1. Two-phase locking protocol and its variants.	
		2. Multiple granularity protocol.	
		3. Wait wound scheme.	
	[B]	Discuss how database system use database log file to maintain atomicity property of transaction.	[2]

Q-4 **[A]** Write a PL/SQL code that check the price of product 'P001' is less than 4000, then change the price to 4000. The price change is to be recorded in the old_price_ table along with product_no and the date on which the price was last changed. **[6]**
Product_master: {product_no, sell_price}
Old_price_table : {product_no,date_chnaged,old_price}

[B] Write a PL/SQL code using cursor that determines the top 5 highest paid employee from Employee table. Raise the salary of those highest paid employees by 30% and store those records in new table called Emp_Raise. **[6]**
Employee: {**Emp_no**, Emp_name, Emp_salary}
Emp_Raise: { Emp_no, Emp_Newsal, Inc_date}

OR

Q-4 **[A]** Write a PL/SQL code that enter two numeric values and store in the Variables v_num1 and v_num2. You need to arrange values so that the smaller value is always stored in v_num1, and the larger value is always stored in the v_num2. **[4]**

[B] Explain the following terms: **[4]**
a) Mesh   b) Hypercube

[C] Differentiate Rollback and Rollback to save point with example. **[4]**

Q-5 **[A]** Discuss basic steps to manage explicit cursor? Also define explicit cursor attribute. **[6]**

[B] Explain Iterative Statements in PL/SQL with example. **[5]**

OR

Q-5 **[A]** Explain the following terms: **[6]**
a) Shared Nothing   b) Hierarchical Memory

[B] Write PL/SQL code for the followings: **[5]**
User enter emp_no,name and basic_salary for table STAFF, check basic_salary if it is less than 8000 then raise user define exception that salary is less than 8000 otherwise generate salary slip. Use data for DA=60% of basic salary, HRA= 7.5% of Basic salary, MA=100, INCTAX=1000, PT=100, PF=1000
Table: **STAFF** (**Empno** , Name , Basic_salary)
Table:SALARYSLIP(EMPNO,BASIC_SALARY,HRA,DA,MA,ITCTAX,PT, PF, GROSSSALARY, NETSALARY)

Q-6 **[A]** What is Exception Handling? Explain types of exception Handling. **[8]**

[B] What is a Procedure in PL/SQL? Also write syntax to create Procedure and explain each keyword in detail. **[4]**

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