Ch 9_Quiz

Multiple Choice Questions (10%)

(C) 1. Which of the following describes only the portion of a database available to a particular user?

A. Database model B. Schema C. Subschema D. DBMS

(A) 2. Which of the following features within a DBMS is not provided to maintain database integrity?

A. Concurrent transaction processing B. Log C. Locking protocol D. Commit points

(B) 3. Which of the following is not a potential problem caused by multiple transactions manipulating a database at the same time? A. Lost update problem B. Clustering C. Deadlock D. Incorrect summary problem

(C) 4. Which of the following relational operations combine data from more than one relation?

A. SELECT B. PROJECT C. JOIN

(A or C) 5. Which of the following file structures is associated with the problem of clustering?

A. Sequential B. Indexed C. Hash

Fill-in-the-blank/Short-answer Questions (90%)

1. Given the relation Employees containing the attributes Name, Address, and CurrentJobID and the relation Jobs containing the attributes JobID, SkillRating, Department, what question is answered by the following sequence of operations? (8%)

```
Temp1 ← JOIN Employees and Jobs where Employees.CurrentJobID = Jobs.JobID
Temp2 ← SELECT from Temp1 where Department = "Personnel"
Result ← PROJECT Name from Temp2
```

employees work in Personnel

2. Given the relation Employees containing the attributes Name, Address, and BirthDate, what question is answered by the following sequence of operations? (8%)

```
Temp ← SELECT from Employees where BirthDate < "January 4, 1975"
Result ← PROJECT Name from Temp
```

the name of employees who's birthDate before 1975/1/4

3. Given the three relations X, Y, and Z below

X:

A	B
7	s
3	z
1	u

Y:

C	D
t	4
r	2

Z:

E	F
2	w
3	q

what values would be retrieved by executing the following statement? (8%)

```
SELECT X.B, Y.C, Z.F FROM X, Y, Z WHERE X.A > Y.D AND X.A = Z.E
```

z r q

4. Given the two relations X and Y below

X:

A	B
7	s
3	z
1	u

Y:

C	D
t	1
r	2

what values would be retrieved by executing the following statement? (8%)

```
SELECT X.A, X.B, Y.C FROM X, Y WHERE X.A < Y.D
```

1 u t

5. Suppose a relation X had the attributes Name, EmployeeID, and Address. Complete the following statement to obtain a list of the names and addresses of all employees. (8%)

Result ← PROJECT Name, Address from X

PROJECT Name, Address

6. Given the two relations X and Y below

X:	A	B
	2	s
	5	z

Y:	C	D
	t	1
	r	3
	w	2

what values would be in the tuple produced by the following statement? (8%)

```
Result ← JOIN X and Y where X.A < Y.D
```

2 s r 3

7. Place an X in the space before those structures that are designed to provide efficient access to randomly chosen items. Leave the other spaces blank. (8%)

____ Sequential file

X X Indexed file

X X Hash file

8. Suppose you were going to construct a hash file with 20 to 25 buckets using the division hash function discussed in the text. How many buckets should you actually use? (8%)

23 23

避免碰撞→商要盡可能不同 20-25之間的質數

9. List four data mining techniques. (8%)

sequential pattern analysis, cluster analysis, outlier analysis, class description

10. Place an X in the space before those questions whose answers might be obtained by means of outlier analysis. Leave the other spaces blank. (8%)

X Which are the flawed parts on a production line conveyor belt?

____ What items have not sold during the last two days?

____ What sales region generated the most orders over the last sales period?

X Which shoppers in a busy shopping mall are potential shoplifters?

11. Given the two relations X and Y below

X:	A	B
	2	s
	5	z

Y:	C	D
	t	1
	r	3
	w	2

draw the relation Result that would be produced by the following statements? (10%)

```
Temp ← JOIN X and Y where X.A > Y.D
Result ← PROJECT X.B, Y.C from Temp
```

X.B	Y.C
s	t
z	t
z	r
z	w

Temp:

X.A	X.B	Y.C	Y.D
2	s	t	1
5	z	t	1
5	z	r	3
5	z	w	2

Result:

X.B	Y.C
s	t
z	t
z	r
z	w