**第3章 SQL 作业答案**

**1．选择题**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **题号** | **答案** | **题号** | **答案** | **题号** | **答案** | **题号** | **答案** | **题号** | **答案** |
| （1） | B | （2） | B | （3） | A | （4） | A | （5） | B |
| （6） | C | （7） | A | （8） | D | （9） | D | （10） | B |
| （11） | B | （12） | B | （13） | A | （14） | D | （15） | C |
| （16） | B | （17） | B | （18） | B | （19） | A | （20） | C |
| （21） | B | （22） | A | （23） | D | （24） | A | （25） | B |
| （26） | C | （27） | C | （28） | C | （29） | D |  |  |

**2．填空题**

(1)R.A=S.A

(2)WHERE GROUP BY HAVING ORDER BY ASC DESC DISTINCT LIKE % \_(下划线)

(3)右外连接 左外连接

(4)嵌套子查询 相关子查询

(5)BETWEEN 20 AND 22

(6) πSname (σgrade<60 (SC) ∞S)

(7)SC.C#=C.C#

(8)UPDATE SC SET

(9)DROP

**3.综合练习题**

1)、（1）DELETE FROM 学生 WHERE 学号=“20013016”

（2）UPDATE 教师 SET 所在部门=“电信系” WHERE 教师编号=“003”

（3）删除本题

（4）ALTER TABLE 学生 ADD（奖学金 INT）

2）、（1）SELECT COUNT（DISTINCT C#） FROM SC

（2）SELECT AVG（AGE） FROM S，SC WHERE S.S#=SC.S# AND SC.S#=“C4”

或者SELECT AVG（AGE） FROM S WHERE S# IN （SELECT S# FROM SC WHRER SC.S#=“C4”）

（3）SELECT AVG（DEGREE） FROM S，SC WHERE S.S#=SC.S# AND TEACHER=“李文” GROUP BY SC.C#

（4）SELECT SNAME，AGE FROM S WHERE SNAME LIKE “王%”

(5)INSERT INTO STUDENT(S#,SNAME,SEX)

SELECT S#,SNAME,SEX　FROM S WHERE　NOT EXISTS　(SELECT \* FROM SC WHERE GRADE<80 AND S.S#=SC.S#)

（6）INSERT INTO S VALUES （‘S9’，‘WU’，18，‘F’）

（7）UPDATE SC SET GRADE=GRADE\*1.1 WHERE GRADE<(SELECT AVG(GRADE) FROM SC) AND S# IN (SELECT S# FROM S WHERE SEX='F')

(8) DELETE FROM SC　WHERE S# IN　(SELECT S#　FROM S WHERE SNAME='王林')

3）、（1） （2） （3）略

**4、综合实训**

1）略

2)(1)CREATE INDEX 编号\_readers ON readers( 编号)

CREATE INDEX 编号\_books ON books( 编号)

(2)

SELECT b.读者编号, c.姓名, a.编号, a.书名,借期+借阅期限 as 应还日期

FROM books a, borrowinf b, readers c,readertype d

WHERE a.编号 = b.图书编号 and b.读者编号 =c.编号 and

c.读者类型 = d.类型编号 and b.还期 is null and应还日期<getdate()

(3) SELECT a.编号, a.姓名, b.图书编号, b.借期

FROM readers a,Borrowinf b

WHERE a.编号 =b.读者编号 and a.编号= '2005060328' AND b.还期 IS NULL

(4) SELECT a.编号, a.姓名, b.图书编号,b.借期

FROM readers a,Borrowinf b

WHERE a.编号 =b.读者编号 and a.姓名 = '王立群' AND b.还期 IS NULL

(5) SELECT \* FROM readers a,readertype b

WHERE a.读者类型=b.类型编号 and b.类型名称 = '研究生'

(6) SELECT \* FROM books WHERE 书名 LIKE ‘%程序设计%’

(7) SELECT COUNT(\*) FROM books

(8) SELECT COUNT(定价) FROM books

(9) SELECT 出版社,COUNT(\*) FROM books GROUP BY 出版社

(10) SELECT 类型名称,COUNT(\*) FROM readers a,borrowinf b ,readertype c WHERE a.编号=b.读者编号 AND a.读者类型=c.类型编号 AND 借期 BETWEEN ‘2007-1-1’AND ‘2007-12-31’GROUP BY 类型名称

(11) SELECT b.\* FROM books a,borrowinf b

WHERE a.编号=b.图书编号 AND 作者=’梁晓峰’AND

借期 BETWEEN ‘2007-1-1’AND ‘2007-12-31’

(12) SELECT 读者编号,图书编号 FROM books a,borrowinf b

WHERE a.编号=b.图书编号 AND 作者=’张大海’

(13) SELECT 编号,姓名,已借数量 FROM readers a,readertype b

WHERE a.读者类型=b.类型编号 AND 类型名称=’教师’

(14) SELECT 读者编号,借阅日期 FROM borrlwinf a,books b

WHERE a.图书编号=b.编号 AND 书名=’C语言程序设计’

(15) SELECT 编号,姓名 FROM readers a,borrowinf b

WHERE a.编号=b.读者编号 AND

借期IN (SELECT 借期FROM borrowinf GROUP BY借期HAVING COUNT(\*)>1)

(16) SELECT 姓名,已借数量,书名,借期,还期

FROM readers a,borrowinf b,books c

WHERE a.编号=b.读者编号 AND a.读者类型=c.类型编号 AND

类型名称=’研究生’

(17) SELECT 读者编号,借期,还期 FROM borrowinf

WHERE 图书编号IN(SELECT 编号 FROM books WHERE 出版社=’蓝天’

(18) SELECT 读者编号 FROM borrowinf

WHERE 图书编号NOT IN(SELECT 编号 FROM books WHERE 出版社=’青山’

**五、SQL查询练习**

（1）建立表（oracle的语法）

create table student(sno int,sname char(12),sex char(4),birthday date,class char(10) );

insert into student values(108,'曾化','男',to\_date('09/01/77','mm/dd/yy'),'95033');

insert into student values(105,'明化','男',to\_date('09/01/77','mm/dd/yy'),'95033');

insert into student values(107,'王丽','女',to\_date('09/01/77','mm/dd/yy'),'95033');

insert into student values(101,'李军','男',to\_date('09/01/77','mm/dd/yy'),'95033');

insert into student values(109,'王芳','女',to\_date('09/01/77','mm/dd/yy'),'95033');

insert into student values(103,'叶军','男',to\_date('09/01/77','mm/dd/yy'),'95033');

create table teacher(tno int ,tname char(12),sex char(4),birthday date,proff char(10),depart char(20) );

insert into teacher values(804,'张化','男',to\_date('09/01/70','mm/dd/yy'),'付教授','计算机系');

insert into teacher values(856,'王化','男',to\_date('09/01/70','mm/dd/yy'),'付教授','电子系');

insert into teacher values(825,'刘化','男',to\_date('09/01/70','mm/dd/yy'),'付教授','计算机系');

insert into teacher values(831,'离化','男',to\_date('09/01/70','mm/dd/yy'),'付教授','工程系');

insert into teacher values(854,'中化','男',to\_date('09/01/70','mm/dd/yy'),'付教授','计算机系');

（2）插入数据（oracle的语法）

create table course(cno char(8) ,cname char(12),tno int);

insert into course values('3\_105','计算机导论',825);

insert into course values('3\_245','操作系统',804);

insert into course values('6\_166','数字导论',8565);

insert into course values('9\_888','高等数学',825);

create table score(sno int,cno char(8), degree number(8,2));

insert into score values(103,'3\_245',86);

insert into score values(109,'3\_245',96);

insert into score values(105,'3\_245',76);

insert into score values(103,'3\_105',80);

insert into score values(105,'3\_105',36);

insert into score values(109,'3\_105',76);

insert into score values(101,'6\_166',96);

insert into score values(107,'6\_166',89);

insert into score values(108,'6\_166',87);

insert into score values(101,'6\_166',80);

insert into score values(107,'6\_166',85);

insert into score values(107,'3\_105',99);

insert into score values(108,'3\_105',99);

insert into score values(107,'3\_245',69);

insert into score values(108,'3\_245',79);

commit;

（3）查询

1. Select name, sex, class from studnt;

2. Select distinct depart from teacher;

3. Select sno as 学号, name as 姓名, sex as 性别 , birthday as 出生日期 from student;

4. Select \* from score where degree between 60 and 80;

Select \* from score where degree in (85, 86, 88);

Select \* from student where class=98031 or sex=‘女’;

7. Select \* from student order by class desc;

8. Select \* from score order by cno, degree desc;

9. Select count(\*) from student where class=95031;

10. select sno,cno,degree as 最高分

from score where degree=

(select max(degree) from score)

SNO CNO 最高分

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103 3-105 92

11. Select avg(degree) as 课程平均分 from score where cno=‘3-105’

12. Select cno,avg(degree) from score where cno like ‘3%’ Group by cno having count(\*) >=5;

13. Select sno from score group by sno Having min(degree)>70 and max(degree)<90;

14. select sname,cno,degree from score,student where student.sno=score.sno;

15. Select sname, cname, degree from course , student,score Where student.sno=score.sno and course.cno=score.cno;

16. Select cno,avg(degree) from student , score where student.sno=score.sno and student.class=‘95033’ group by cno;

16另解

SQL> select cno,avg(degree) from score

2 where sno in(select sno from student where

3 class=95033) group by cno;

CNO AVG(DEGREE)

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3-105 77.6666667

6-166 81.6666667

16另解 select avg(degree) from score

where sno in (select sno from student where

class=95033 ) group by cno

17(另解）

select sno, cno, degree from score

where cno='3-105’ and degree>(select degree from score where

cno='3-105' and sno=109)

17.select x.cno, x.sno, x.degree from score x, score y

where x.cno=‘3-105’ and x.degree>y.degree and y.sno=109

and y.cno=‘3-105’;

18. Select a.sno, a.degree, a.cno from score a, score b Where a.sno=b.sno and a.degree<b.degree;

19. Select x.cno, x.sno, x.degree

from score x, score y

Where x.degree>y.degree and y.sno=109 and y.cno=‘3-105’;

20. Select sno,sname,birthday from student

Where to\_char(birthday,’yy’)=

(select to\_char(birthday,’yy’) from student

where sno=108)

21.

Select cno, sno, degree from score

Where cno=(select x.cno from course x, teacher y

where x.tno=y.tno and y.tname=‘张旭’）

22.

Select tname from teacher

Where tno in( select x.tno from course x, score y

where x.cno=y.cno

group by x.tno

having count(x.tno)>5)

23 Select \* from student where class in (95033,95031);

24.

select distinct cno from score where degree in

(select degree from score

where degree>85)

或者 select cno from score where degree>85 group by cno;

或者 select cno from score group by cno having max(degree)>85;

25.

Select cno,sno,degree from score

Where cno IN

(select x.cno from course x, teacher y

where y.tno=x.tno and y.depart=‘计算机系’）

26.

Select tname, prof from teacher

where depart=‘计算机系’ and prof NOT IN

(select prof from teacher where depart=‘电子工程系’）

27.

Select cno sno,degree from score

Where cno=‘3-105’ and degree>any

(select degree from score

where cno=‘3-245’)

Order by degree desc;

28. Select cno sno,degree from score

Where cno=‘3-105’ and degree>ALL

(select degree from score

where cno=‘3-245’)

29.

Select tname,depart from teacher a

where EXIST

( select \* from course b where a.tno=b.tno)

或者select tname,depart from teacher where tno in

(select tno from course);

30.

Select name,depart from teacher a

where NOT EXIST

( select \* from course b

where a.tno=b.tno)

31.

select name,sex,birthday from teacher

union

select name,sex,birthday from student

32. Select distinct sno from score x

Where not exists

(select \* from score y

where y.sno=103 and

not exists

(select \* from score z

where z.sno=x.sno and z.cno=y.cno) )