

```
create table Curso(  
    numCurso serial,  
    nomeCurso varchar(50),  
    totalCreditos int,  
    constraint cursoPk primary key (numCurso),  
    constraint cursoCheck check (totalCreditos >= 0)  
);
```

```
create table Aluno(  
    numAluno serial,  
    nomeAluno varchar(50),  
    endereco varchar(70),  
    cidade varchar(20),  
    telefone varchar(14),  
    numCurso int,  
    constraint alunoPk primary key (numAluno),  
    constraint cursoFK foreign key (numCurso) references Curso (numCurso)  
);
```

```
create table Professor(  
    numProfessor serial,  
    nomeProfessor varchar(50),  
    areaPesquisa varchar(25),  
    constraint professorPK primary key (numProfessor)  
);
```

```
create table Disciplina(  
    numDisciplina serial,  
    nomeDisciplina varchar(25),  
    quantidadeCreditos int,  
    constraint disciplinaPk primary key (numDisciplina),  
    constraint disciplinaCheck check (quantidadeCreditos >= 0)  
);
```

```
create table Aula(  
    semestre int not null,  
    nota real,  
    numAluno int not null,  
    numProfessor int not null,  
    numDisciplina int not null,  
    numaula serial,  
    constraint aulaPk primary key (numAula),  
    constraint alunoFk foreign key (numAluno) references Aluno(numAluno),  
    constraint professorFk foreign key (numProfessor) references Professor (numProfessor),  
    constraint disciplinaFk foreign key (numDisciplina) references Disciplina (numDisciplina),  
    constraint aulaCheck check (nota >= 0)  
);
```

```
create table Contem(  
    idContem serial,  
    numCurso int,  
    numDisciplina int,
```

```
constraint contemPk primary key (idContem),
constraint cursoFk foreign key (numCurso) references Curso (numCurso),
constraint disciplinaFk foreign key (numDisciplina) references Disciplina (numDisciplina)
);
```

Questao 5

```
select nomeDisciplina from Disciplina where numDisciplina in (select numDisciplina from Contem
where numCurso = (select numCurso from Curso where nomeCurso = 'Ciencia da Computacao'));
```

Questao 6

```
select nomeCurso from Curso where numCurso in (select numCurso from Contem where
numDisciplina = (select numDisciplina from Disciplina where nomeDisciplina = 'Calculo
Numerico'));
```

Questao 7

```
select nomeDisciplina from Disciplina where numDisciplina in (select numDisciplina from Aula
where numAluno = (select numAluno from Aluno where nomeAluno = 'Marcos Joao Casanova')
and semestre = 1);
```

Questao 8

```
select nomeDisciplina from Disciplina where numDisciplina in (select numDisciplina from Aula
where numAluno = (select numAluno from Aluno where nomeAluno = 'Ailton Castro') and nota <
7);
```

Questao 9

```
select nomeAluno from Aluno where numAluno in (select numAluno from Aula where
numDisciplina = (select numDisciplina from Disciplina where nomeDisciplina = 'Calculo
Numerico') and nota < 7 and semestre = 1);
```

Questao 10

```
select nomeDisciplina from Disciplina where numDisciplina in (select numDisciplina from Aula
where numProfessor = (select numProfessor from Professor where nomeProfessor = 'Ramon
Travanti'));
```

Questao 11

```
select nomeProfessor from Professor where numProfessor in (select numProfessor from Aula where
numDisciplina = (select numDisciplina from Disciplina where nomeDisciplina = 'Banco de
Dados'));
```

Questao 12

```
select max(nota),min(nota) from Aula where numDisciplina = (select numDisciplina from
Disciplina where nomeDisciplina = 'Calculo 1') and semestre = 1;
```

Questao 13

```
select distinct Al.nomeAluno,Au.nota from Aluno Al,Aula Au where (Al.numAluno,Au.nota) in
(select numAluno,nota from Aula where numDisciplina = (select numDisciplina from Disciplina
where nomeDisciplina = 'Engenharia de Software') and nota = (select (max(nota)) from Aula));
```

Questao 14

select distinct Al.nomeAluno,D.nomeDisciplina,Pr.nomeProfessor from Aluno Al,Disciplina D,Professor Pr where (Al.numAluno,D.numDisciplina,Pr.numProfessor) in (select numAluno,numDisciplina,numProfessor from Aula where semestre = 1) order by Al.nomeAluno;

Questao 15

select distinct Al.nomeAluno,D.nomeDisciplina,Au.nota from Aluno Al, Disciplina D, Aula Au where (Al.numAluno,D.numDisciplina,Au.nota) in (select numAluno,numDisciplina,nota from Aula where numAluno = (select numAluno from Aluno where numCurso = (select numCurso from Curso where nomeCurso = 'Ciencia da Computacao')) and semestre = 1);

Questao 16

select avg (nota) from Aula where numProfessor = (select numProfessor from Professor where nomeProfessor = 'Marcos Salvador');

Questao 17

select distinct Al.nomeAluno,D.nomeDisciplina,Au.nota from Aluno Al,Disciplina D,Aula Au where (Al.numAluno,D.numDisciplina,Au.nota) in (select numAluno,numDisciplina,nota from Aula where nota >= 5 and nota <= 7) order by D.nomeDisciplina;

Questao 18

select avg (nota) from Aula where numDisciplina = (select numDisciplina from Disciplina where nomeDisciplina = 'Calculo Numerico') and semestre = 1;

Questao 19

select count (*) from Aluno where numAluno in (select distinct numAluno from Aula where numProfessor = (select numProfessor from Professor where nomeProfessor = 'Abgair'));

Questao 20

select avg (nota) from Aula where numAluno = (select numAluno from Aluno where nomeAluno = 'Edvaldo Carlos Silva');

Questao 21

select avg (nota) from Aula where numDisciplina in (select numDisciplina from Aula where semestre = 1) group by numDisciplina order by numDisciplina;

Questao 22

select avg (nota) from Aula where numProfessor in (select numProfessor from Professor) and semestre = 1 group by numProfessor order by numProfessor;

Questao 23

select avg(nota) from Aula where numDisciplina in (select numDisciplina from Aula where numDisciplina in (select numDisciplina from Contem where numCurso = (select numCurso from Curso where nomeCurso = 'Ciencia da Computacao')) and semestre = 1) group by numDisciplina order by numDisciplina;

Questao 24

select sum (quantidadeCreditos) from Disciplina where numDisciplina in (select numDisciplina from Aula where numAluno = (select numAluno from Aluno where nomeAluno = 'Edvaldo Carlos Silva') and nota >= 7);

Questao 25

```
create view Alunos_CreditosAprovados as (select Al.nomeAluno,sum(D.quantidadeCreditos) from
Aluno Al,Disciplina D where (numAluno,numDisciplina) in (select numAluno,numDisciplina from
Aula where nota >= 7) group by Al.nomeAluno);
select nomeAluno,sum from alunos_creditosaprovados where sum >= 70;
```

Questao 26

```
select Al.nomeAluno,D.nomeDisciplina,Pr.nomeProfessor from Aluno Al inner join Aula U on
(Al.numAluno = U.numAluno) inner join Disciplina D on (D.numDisciplina = U.numDisciplina)
inner join Professor Pr on (Pr.numProfessor = U.numProfessor) where U.semestre = 1 and U.nota
>= 8 and Al.numCurso = (select numCurso from Curso where nomeCurso = 'Ciencia da
Computacao');
```

Questao 27

```
select D.nomeDisciplina from Disciplina D inner join Aula L on (D.numDisciplina =
L.numDisciplina) where L.nota = (select min(nota) from Aula);
```

Questao 28

```
create view MediaPorDisciplina as select D.nomeDisciplina,avg (L.nota) from Disciplina D inner
join Aula L on (D.numDisciplina = L.numDisciplina) group by D.numDisciplina order by
D.numDisciplina;
select nomeDisciplina from MediaPorDisciplina where avg = (select max (avg) from
MediaPorDisciplina);
```

Questao 29

```
create view Alunos_CreditosAprovados as (select Al.nomeAluno,sum(D.quantidadeCreditos) from
Aluno Al,Disciplina D where (numAluno,numDisciplina) in (select numAluno,numDisciplina from
Aula where nota >= 7) group by Al.nomeAluno); (Obs ja foi criada essa visao na questao 25)
select nomeAluno from alunos_creditosaprovados where sum >= (select totalCreditos from Curso
where nomeCurso = 'Ciencia da Computacao');
```

Questao 30

```
create view NotasPorDisciplina as select D.nomeDisciplina,L.nota from Disciplina D inner Join
Aula L on (D.numDisciplina = L.numDisciplina) order by L.nota;
select nomeDisciplina,count (nota) from notasPorDisciplina where nota <7 group by
nomeDisciplina order by (count (nota)) desc;
```