

Nome: _____

Número: _____

PARTE I

I.1

```
SELECT DISTINCT IdR, NomeR
FROM cpostais NATURAL INNER JOIN restaurantes
      INNER JOIN premios USING (IdR)
WHERE Estrelas=3 AND Localidade='Coimbra' AND Ano BETWEEN 2000 AND 2010
```

I.2

```
SELECT IdC, NomeC, SUM(Estrelas)
FROM premios NATURAL INNER JOIN chefes
GROUP BY IdC, NomeC
ORDER BY SUM(Estrelas) DESC
```

I.3

$$\Pi_{IdR, NomeR}(restaurantes) \bowtie \left(\Pi_{IdR, Ano}(\sigma_{Estrelas=3}(premios)) \div \Pi_{Ano}(premios) \right)$$

I.4

$p \leftarrow premios$
 $r \leftarrow restaurantes$

$$\Pi_{r.IdR, r.NomeR} \left(\sigma_{p.IdR=r.IdR} \left(r \times \left(\sigma_{\substack{p1.IdR=p.IdR \wedge \\ \wedge p1.Estrelas=p.Estrelas \wedge \\ p1.Ano=p.ano+1}} (p \times \rho_{p1}(p)) \right) \right) \right)$$

PARTE II

Modelo	II.1	II.2	II.3	II.4	II.5	II.6	II.7	II.8	II.9	II.10
adbadca	C	J	M	G	C	A	D	J	L	W
adbadcb	C	L	O	I	L	J	L	T	B	W
adbadcc	C	K	N	H	G	E	I	O	P	W
adbadcd	C	M	P	J	R	N	Q	E	F	W