

A)

$$\begin{aligned} & \rho(C_1, \sigma_{country} = 'IT' (\Pi_{language, percentage}(Language))) \\ & \rho(C_2, \sigma_{country} = 'IT' (\Pi_{language, percentage}(Language))) \\ & \Pi_{language}(C_1 \times_{C_1.percentage} >_{C_2.percentage} C_2) \end{aligned}$$

B)

$$\Pi_{country}(\sigma_{language = 'English' \text{ OR } language = 'French'}(Language))$$

C)

$$\begin{aligned} & \rho(L_1, \Pi_{country, language}(Language)) \\ & \rho(L_2, \Pi_{country, language}(Language)) \\ & \rho(L_3, \Pi_{country, language}(Language)) \\ & \Pi_{L_1.country}(\sigma_{\substack{L_1.country = L_2.country \text{ AND } \\ L_2.country = L_3.country \text{ AND } \\ L_1.language <> L_2.language \text{ AND } \\ L_2.language <> L_3.language}})(L_1 \times L_2 \times L_3) \end{aligned}$$

D)

$$\begin{aligned} & \rho(C_1, \Pi_{code, area}(Country)) \\ & \rho(C_2, \Pi_{code, area}(Country)) \\ & \rho(C_3, \Pi_{C_2.code}(C_1 \bowtie_{C_1.area > C_2.area} C_2)) \\ & \rho(C_4, C_2 \bowtie C_3) \\ & \rho(C_5, C_2 \bowtie C_3) \\ & \rho(C_6, \Pi_{C_5.code}(C_4 \bowtie_{C_4.area > C_3.area} C_3)) \\ & \Pi_{C_3.area}(C_3) - C_6 \end{aligned}$$