

$$\begin{array}{ccccccc}
 & & & G_1 & & & \\
 & & & \curvearrowright & & & \\
 \mathcal{B} & \xrightarrow{\quad F \quad} & \mathcal{C} & & \mathcal{D} & \xrightarrow{\quad H \quad} & \mathcal{E} \\
 & & & \Downarrow \alpha & & & \\
 & & & \curvearrowleft & & & \\
 & & & G_2 & & &
 \end{array}$$