Q2i: It is sufficient to show that for any $a, b \in L$, we have that $ab^{-1} \in L$. We write $a = h_1k_1$ and $b = h_2, k_2$ and compute that

$$\begin{aligned}
ab^{-1} &= h_1k_1k_2^{-1}h_2^{-1} \\
&= h_1ek_1ek_2^{-1}h_2^{-1} \\
&= h_1(h_2^{-1}h_2)k_1(h_2^{-1}h_2)k_2^{-1}h_2^{-1} \\
&= (h_1h_2^{-1})(h_2k_1h_2^{-1})(h_2k_2^{-1}h_2^{-1}) && \text{(by generalized associativity)}
\end{aligned}$$

We have that $h_1h_2^{-1} \in H$ and $(h_2k_1h_2^{-1})(h_2k_2^{-1}h_2^{-1}) \in K$ since $h_2 \in Norm_G(K)$. We conclude that L is a subgroup

Q2ii: Let $l = hk \in L$. We evaluate that

$$\begin{aligned}
Kl &= Khk \\
&= hKk && \text{(since h is in } Norm_G(K)) \\
&= hK && \text{(since kK = K)} \\
&= gkK && \text{(since K = kK)} \\
&= lK
\end{aligned}$$

Hence K is normal in L.