

Experiment (9) Infrared (IR) Report Sheet

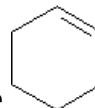
Section number:

group number:

1. Which of the following represents cyclohexane

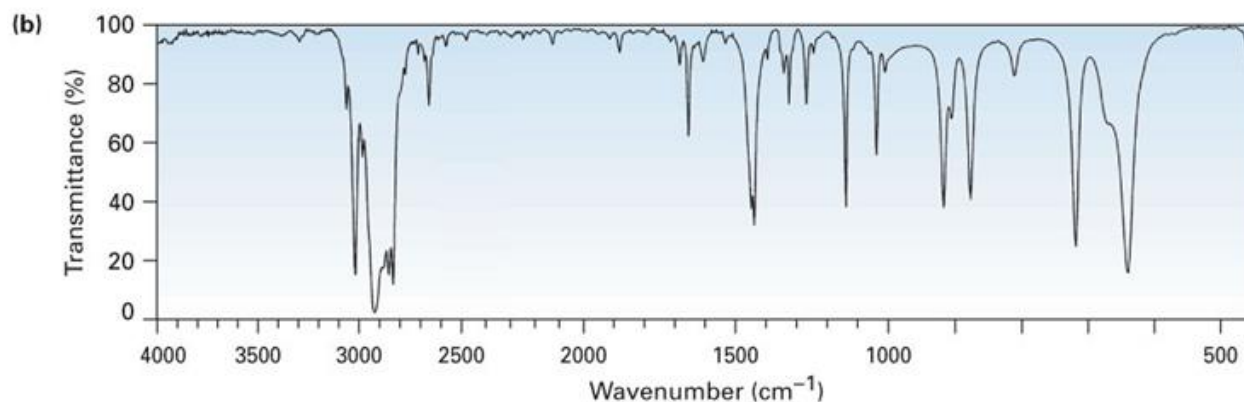
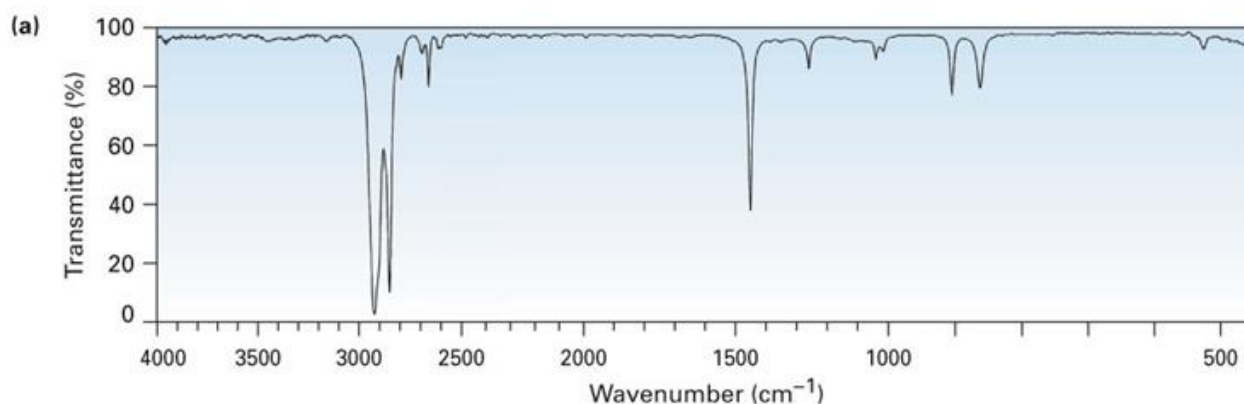


and which cyclohexene



?

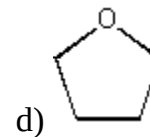
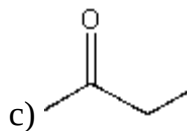
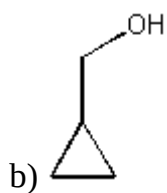
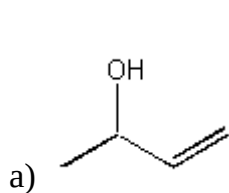
Explain your answer.



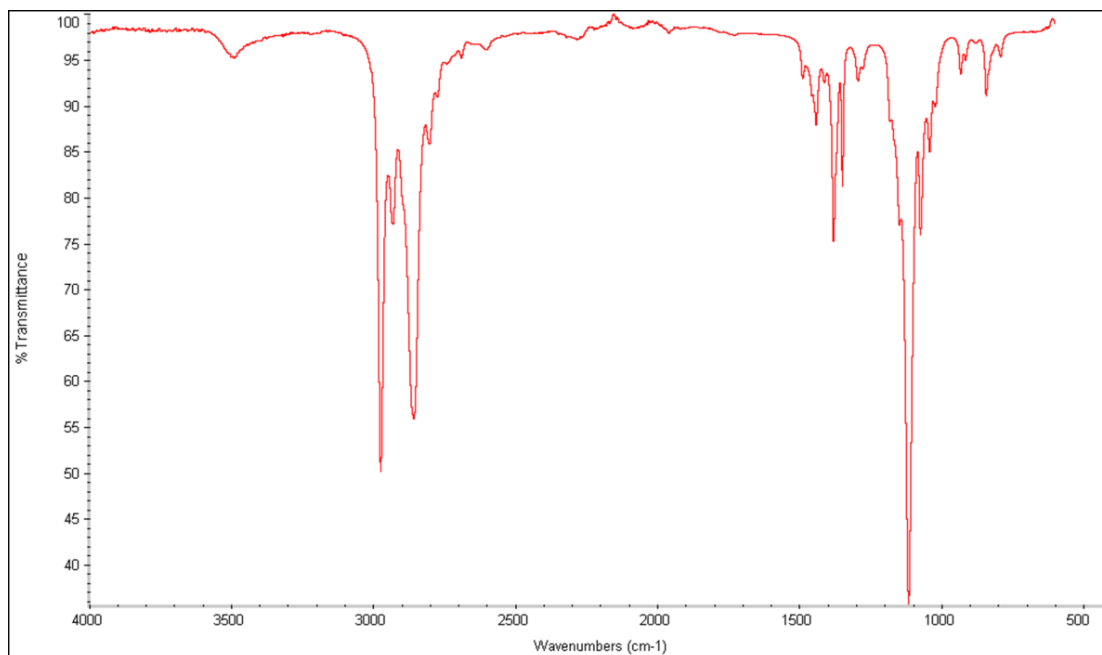
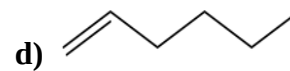
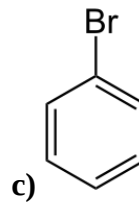
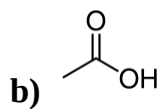
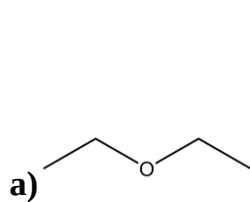
Spectrum (a) is for -----, while spectrum (b) is for -----

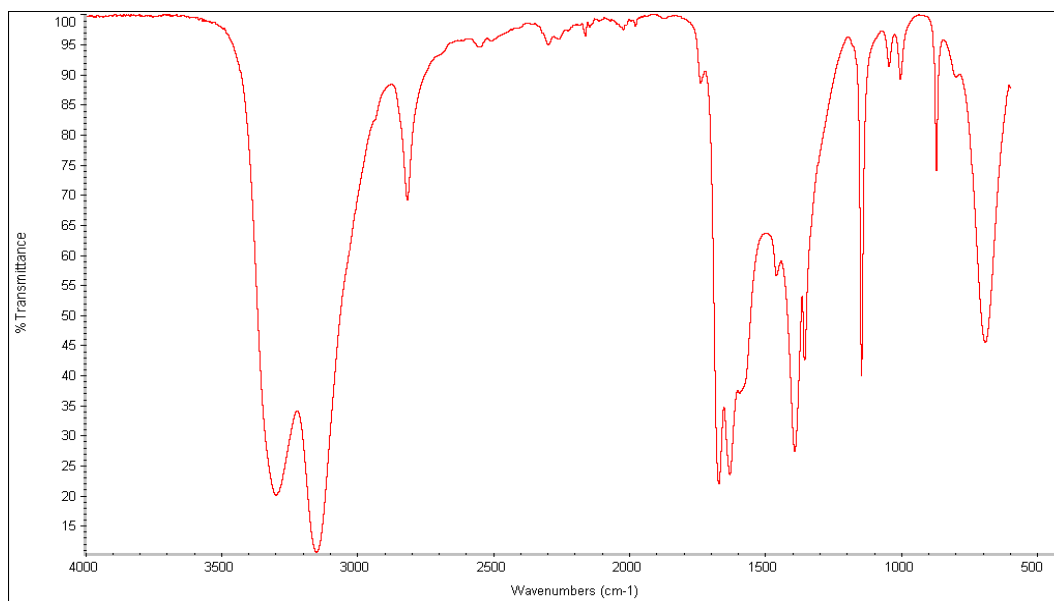
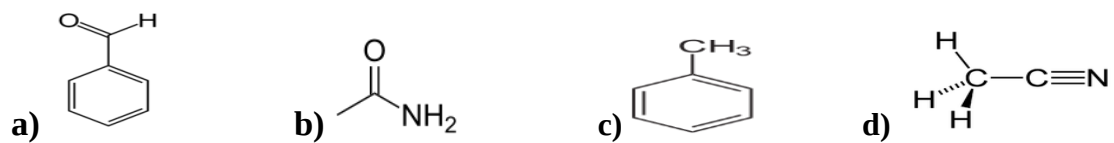
Explanation is: -----

2. Which of the following compounds gives an infrared spectrum with peaks at 3350 cm^{-1} (strong, broad peak) and 1646 cm^{-1} (medium peak)?

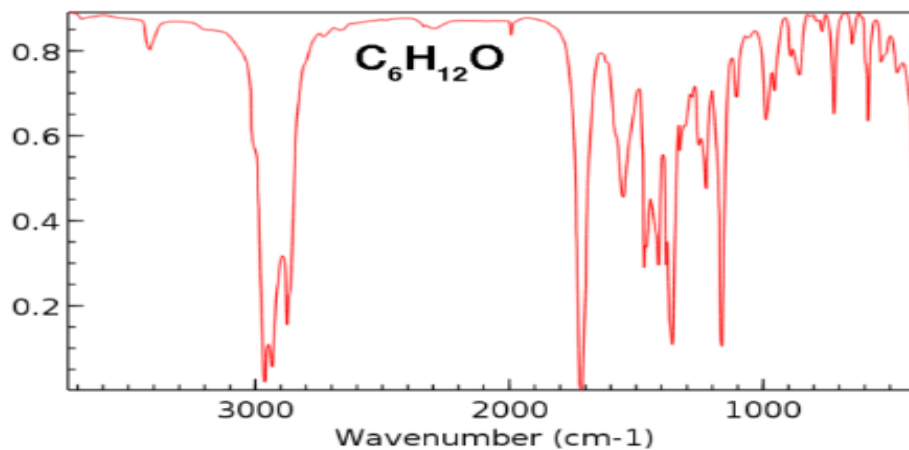
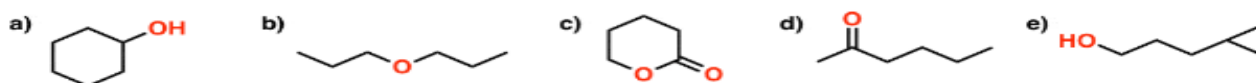


3. Circle the compound that matches the following IR spectrum.

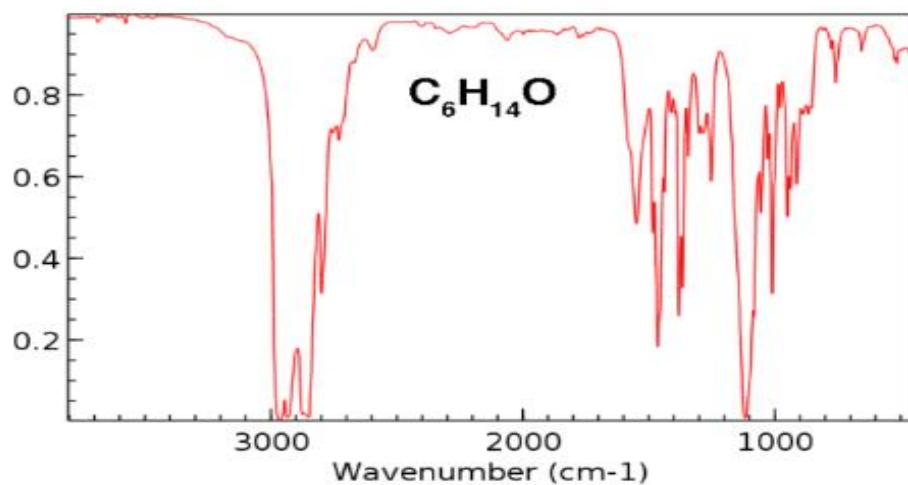
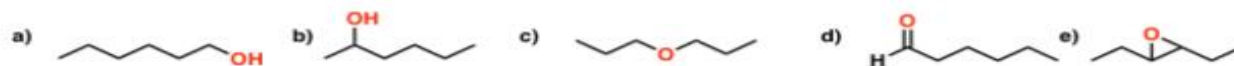




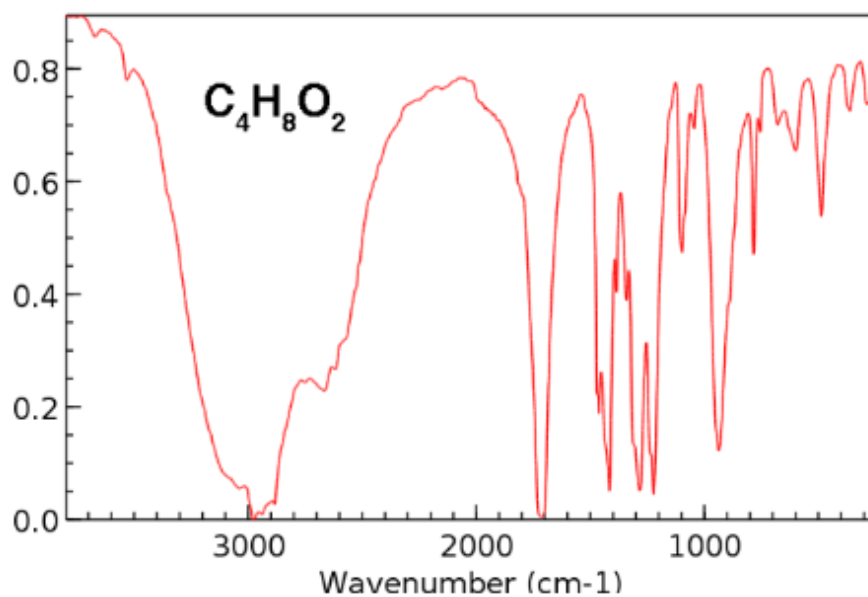
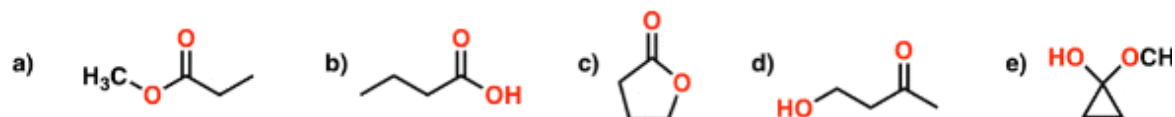
Which of these molecules best corresponds to the IR spectrum below?



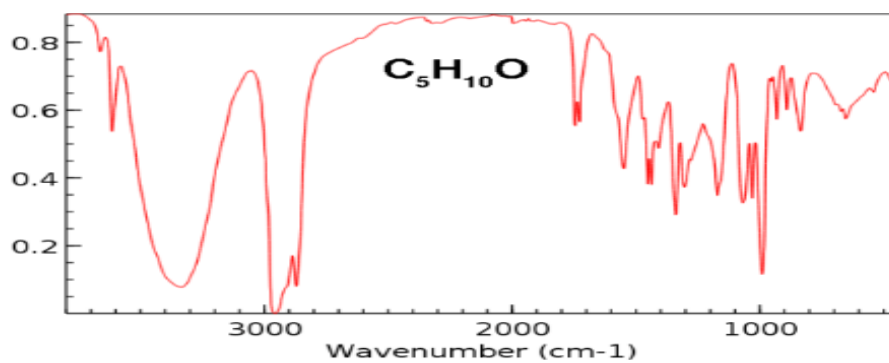
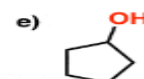
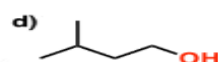
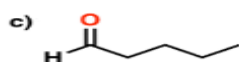
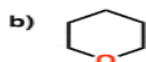
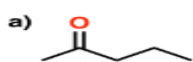
Which of these molecules best corresponds to the IR spectrum below with molecular formula $C_6H_{14}O$?



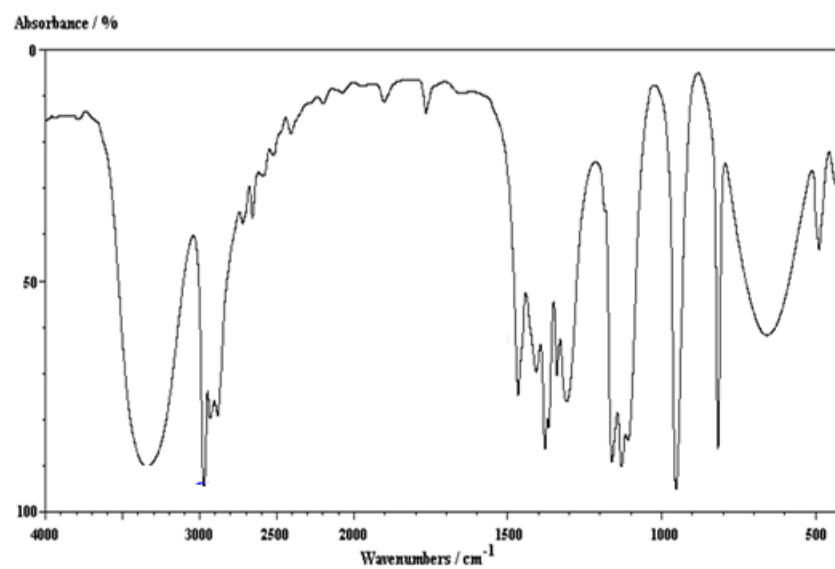
Which of these molecules best corresponds to the IR spectrum below?



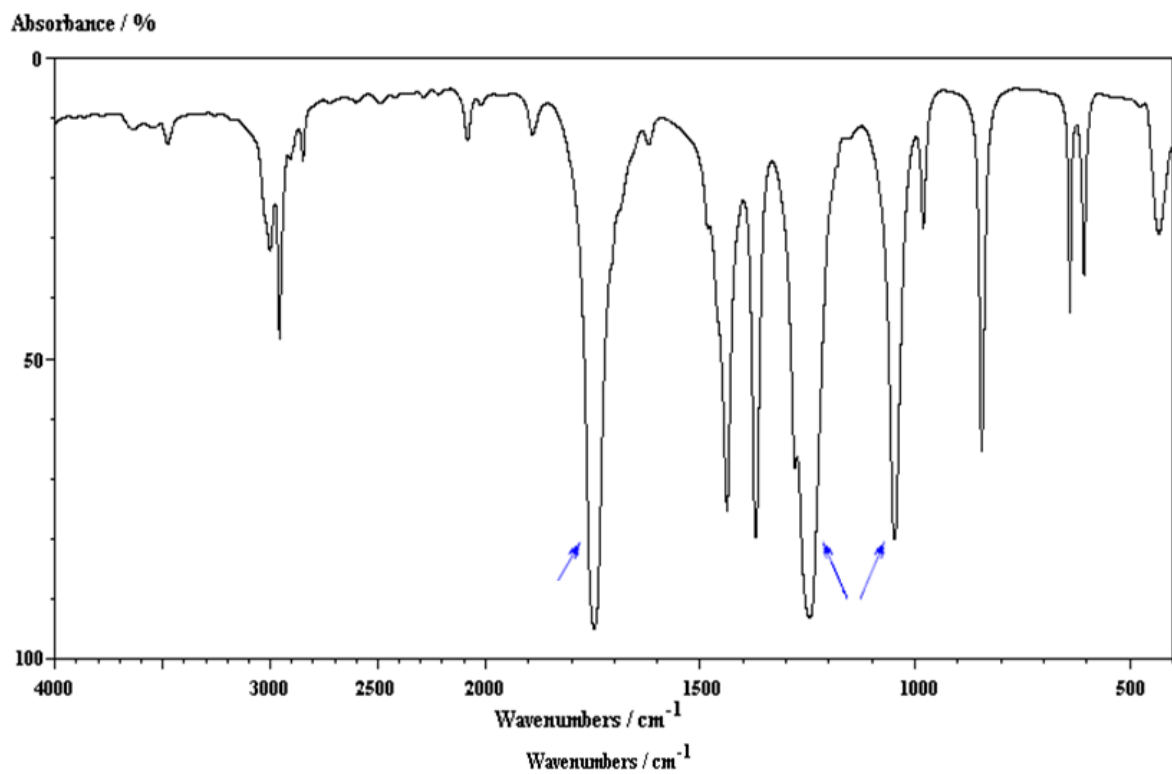
Which of these molecules best corresponds to the IR spectrum below?



4. knowing that the following IR spectrum is for C_3H_8O suggest the possible structures of this compound



5. knowing that the following IR spectrum is for $C_3H_6O_2$ suggest the possible structures of this compound



6. knowing that the following IR spectrum is for C_3H_5N suggest the possible structures of this compound

