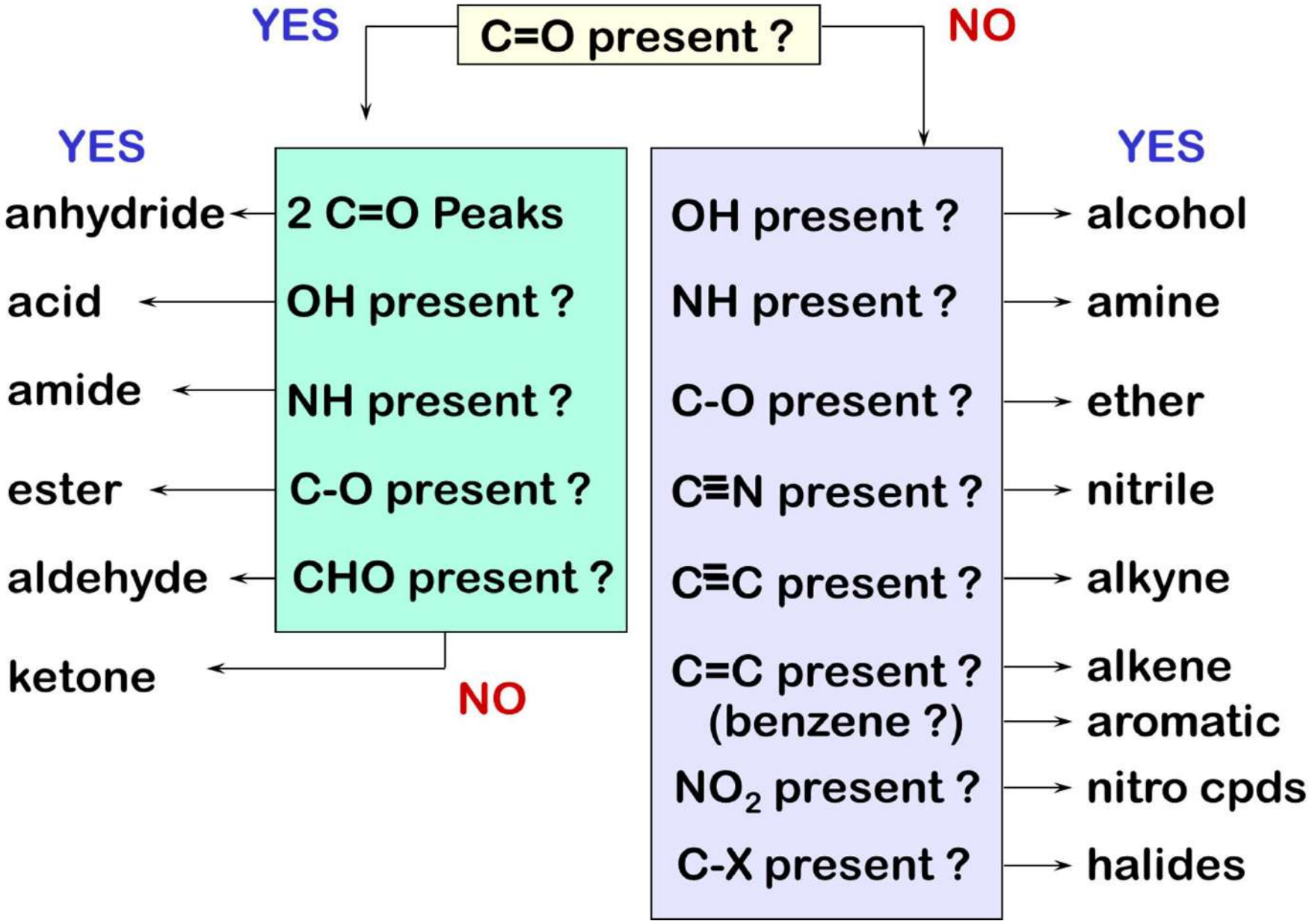
Infrared Spectroscopy

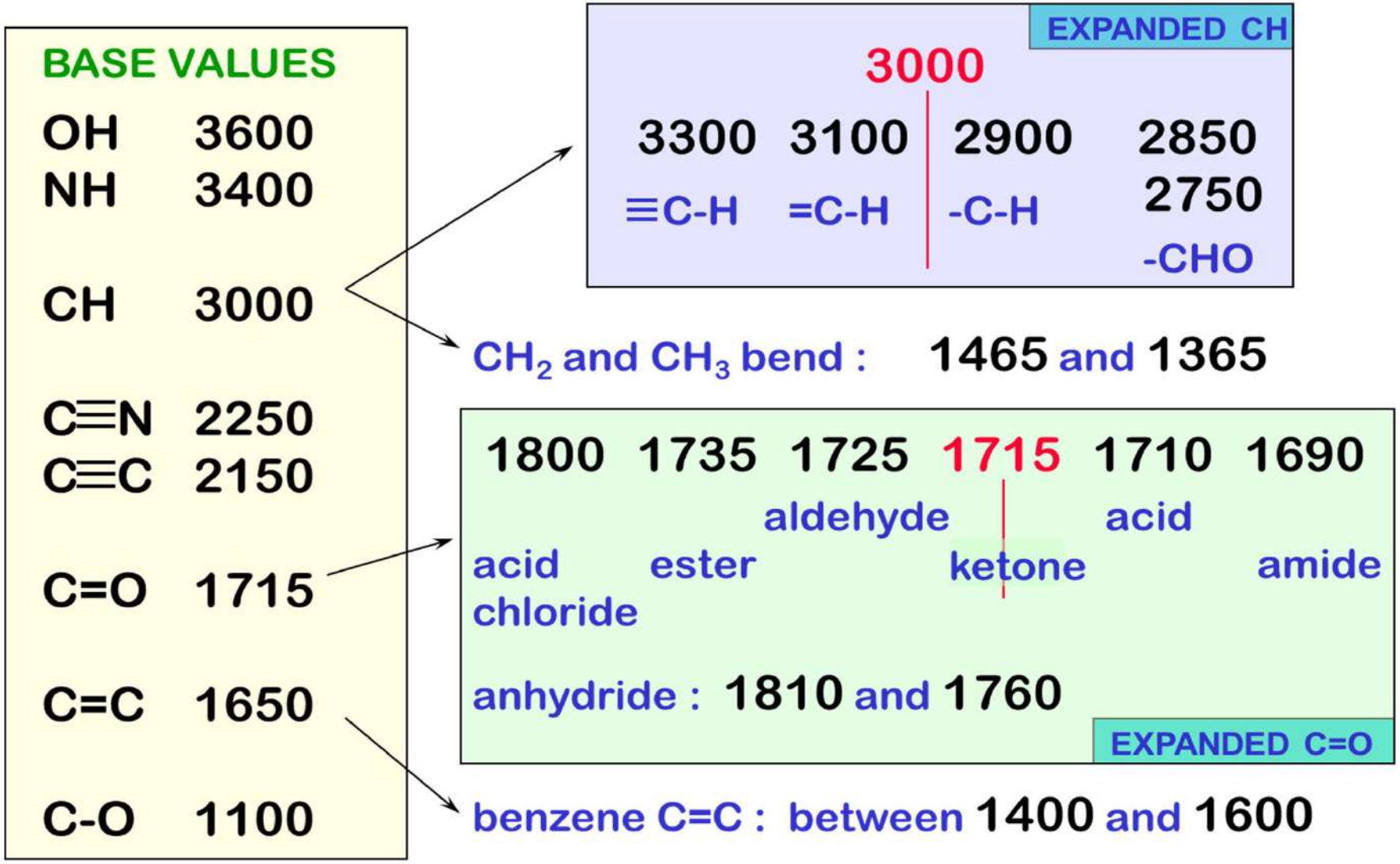
Part "8"
Application

Final Summary & The protocol to solve IR Problems

Final Summary

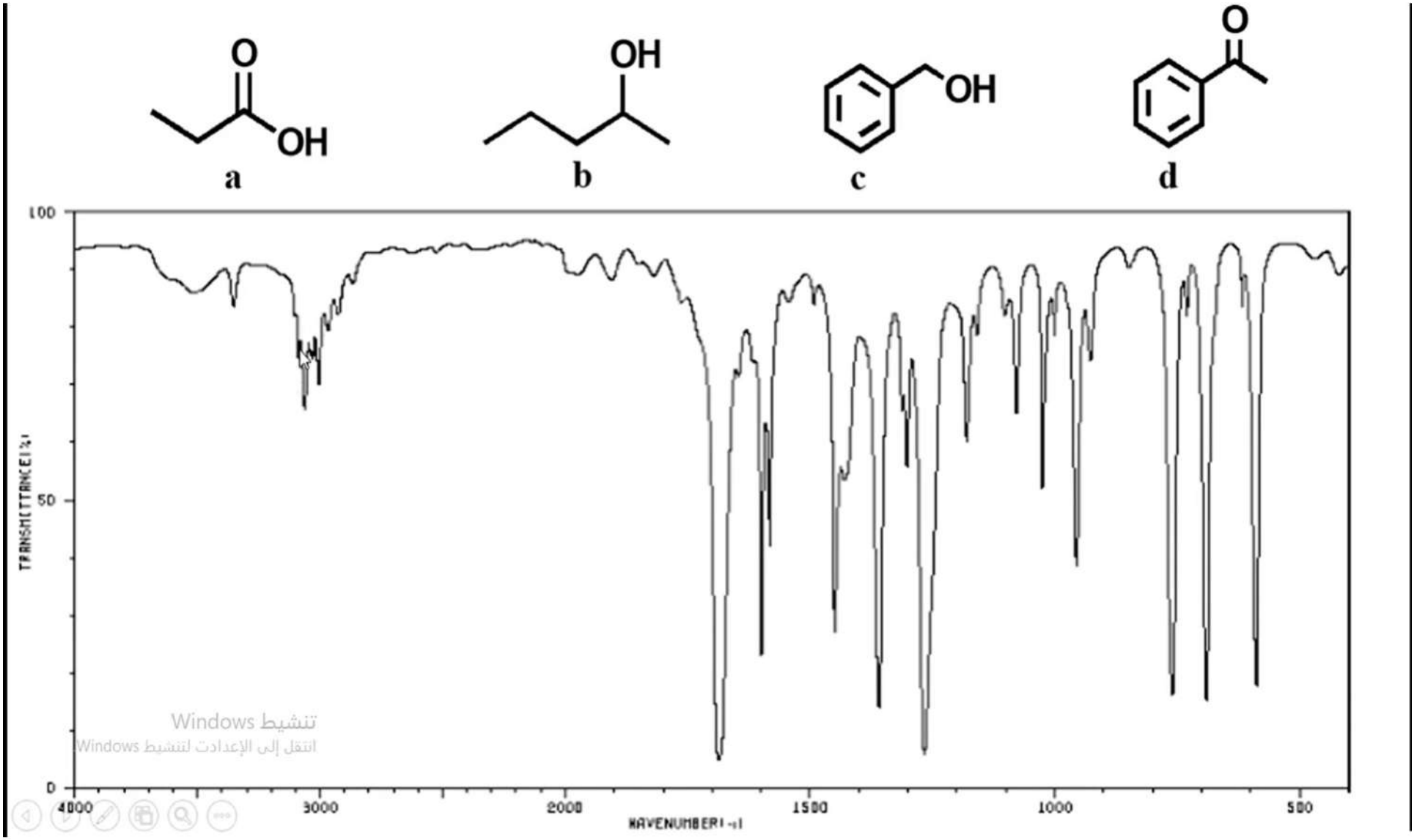


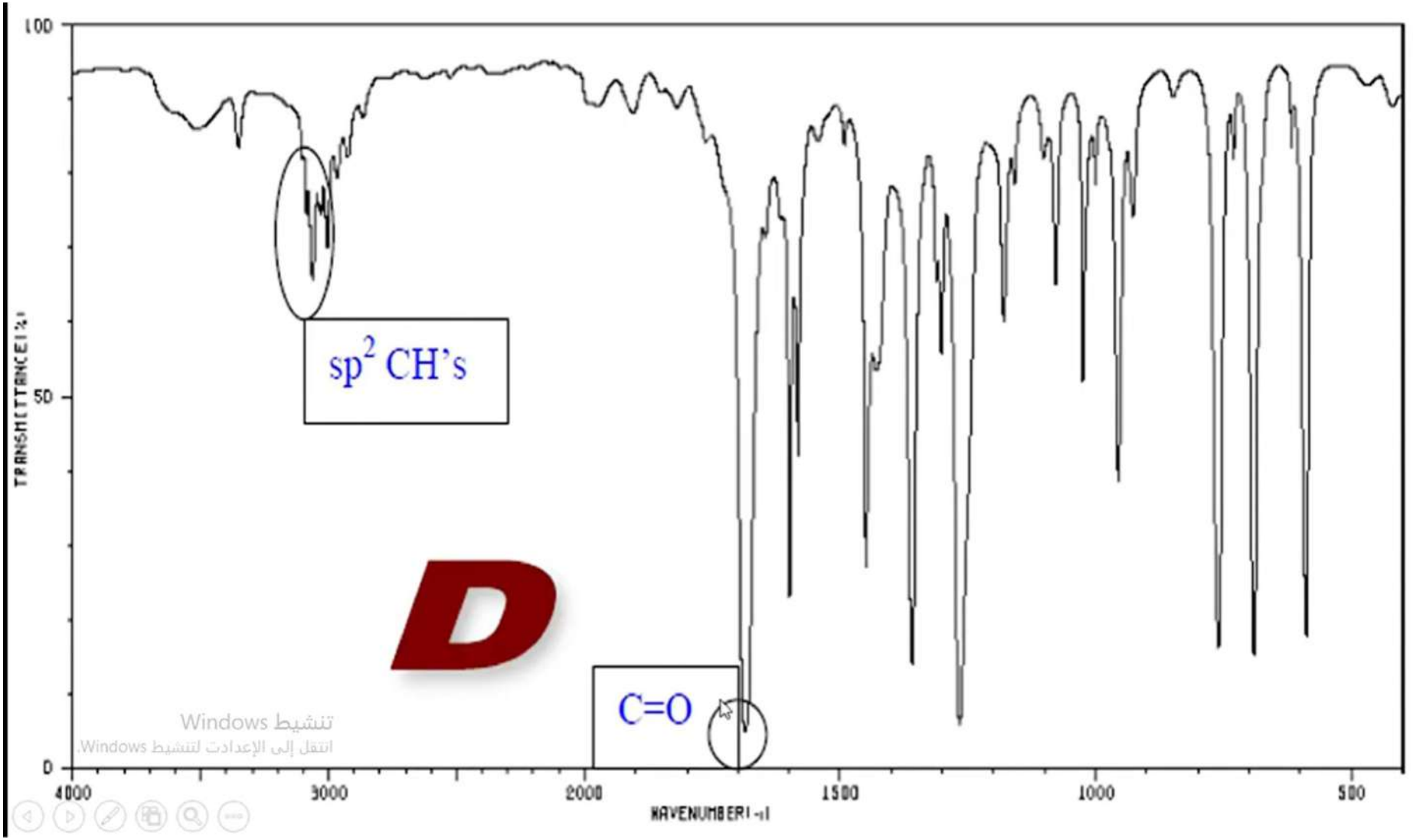
The minimum you need to know

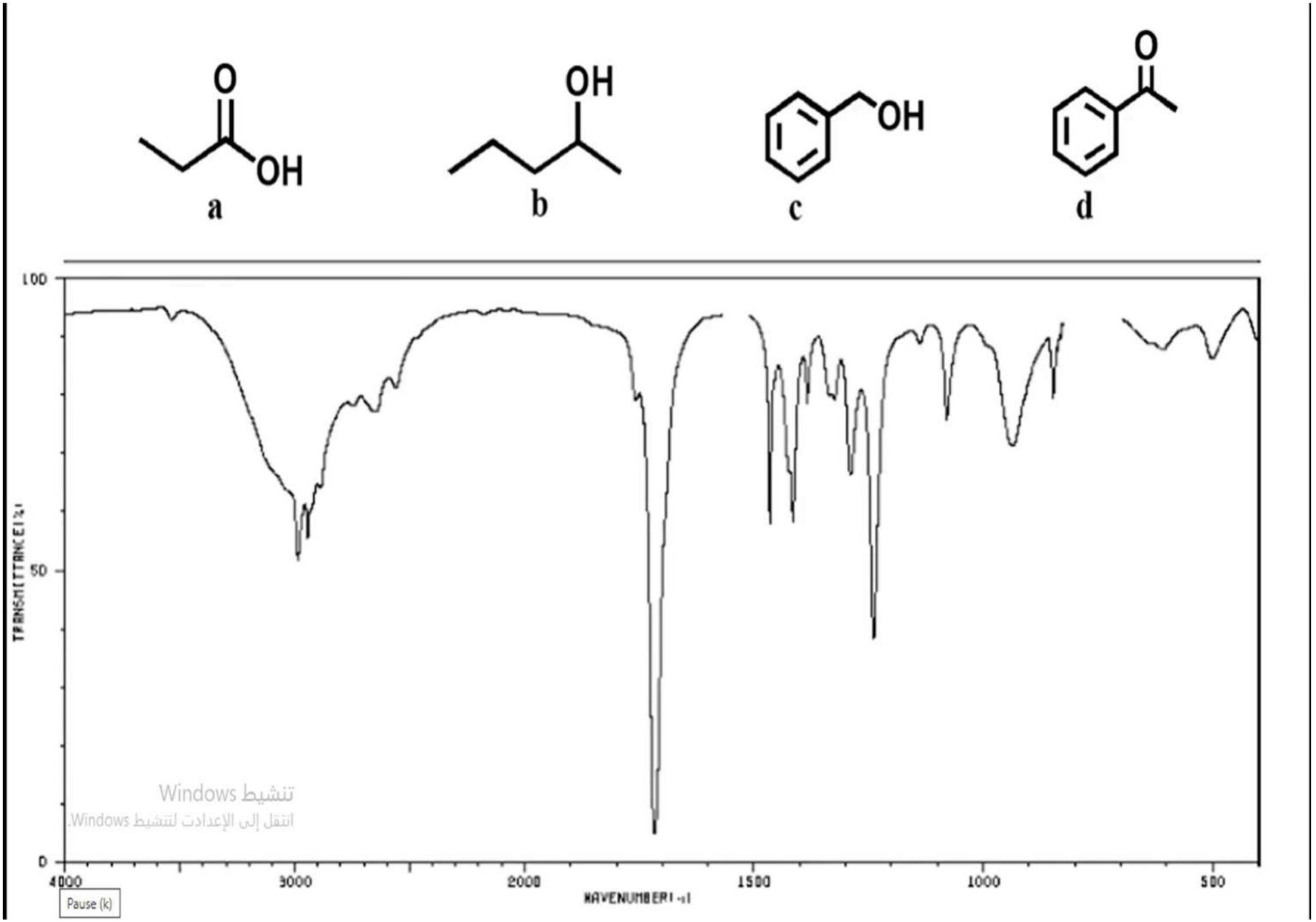


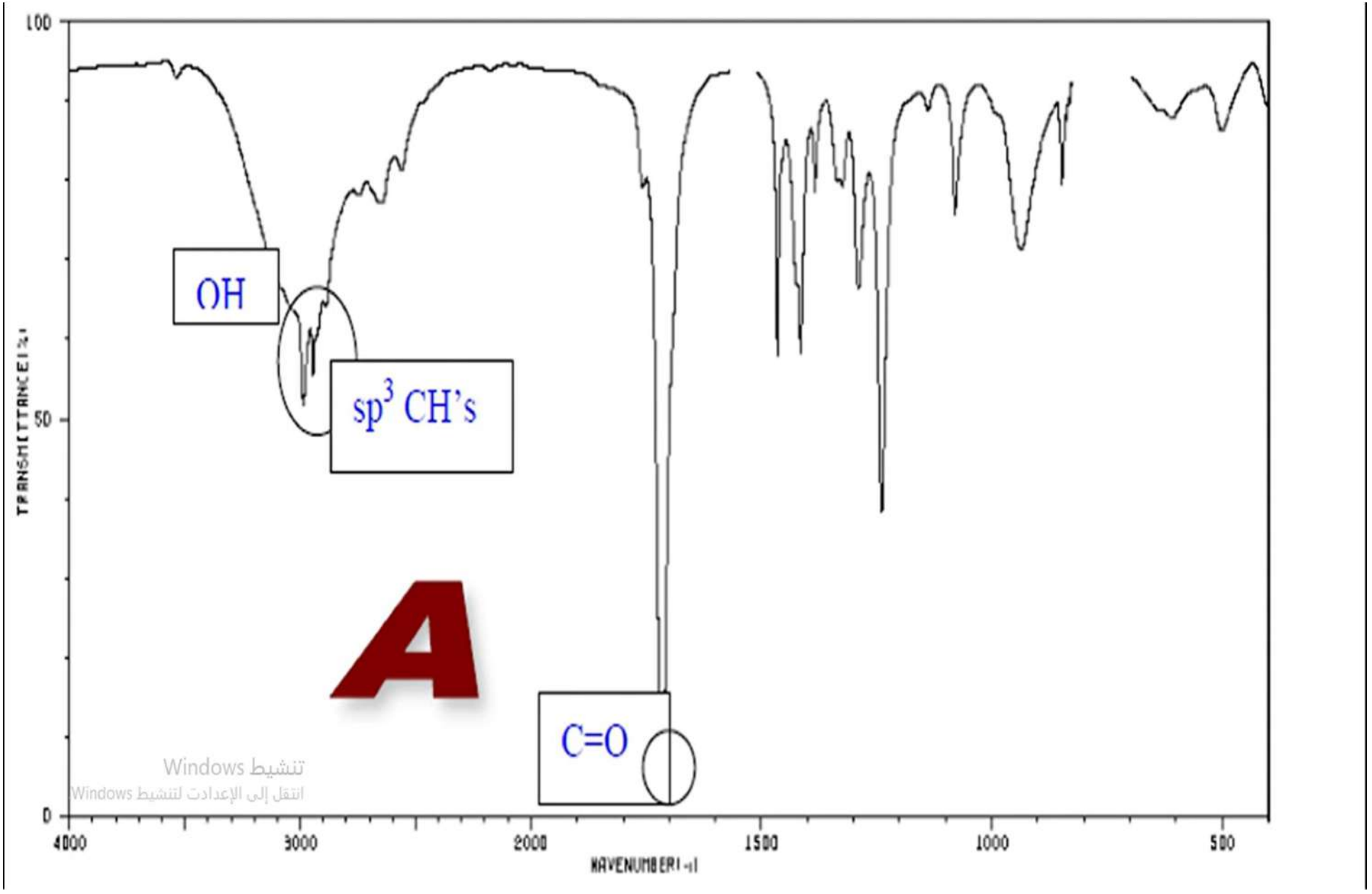
Know also the effects of H-bonding, conjugation and ring size.

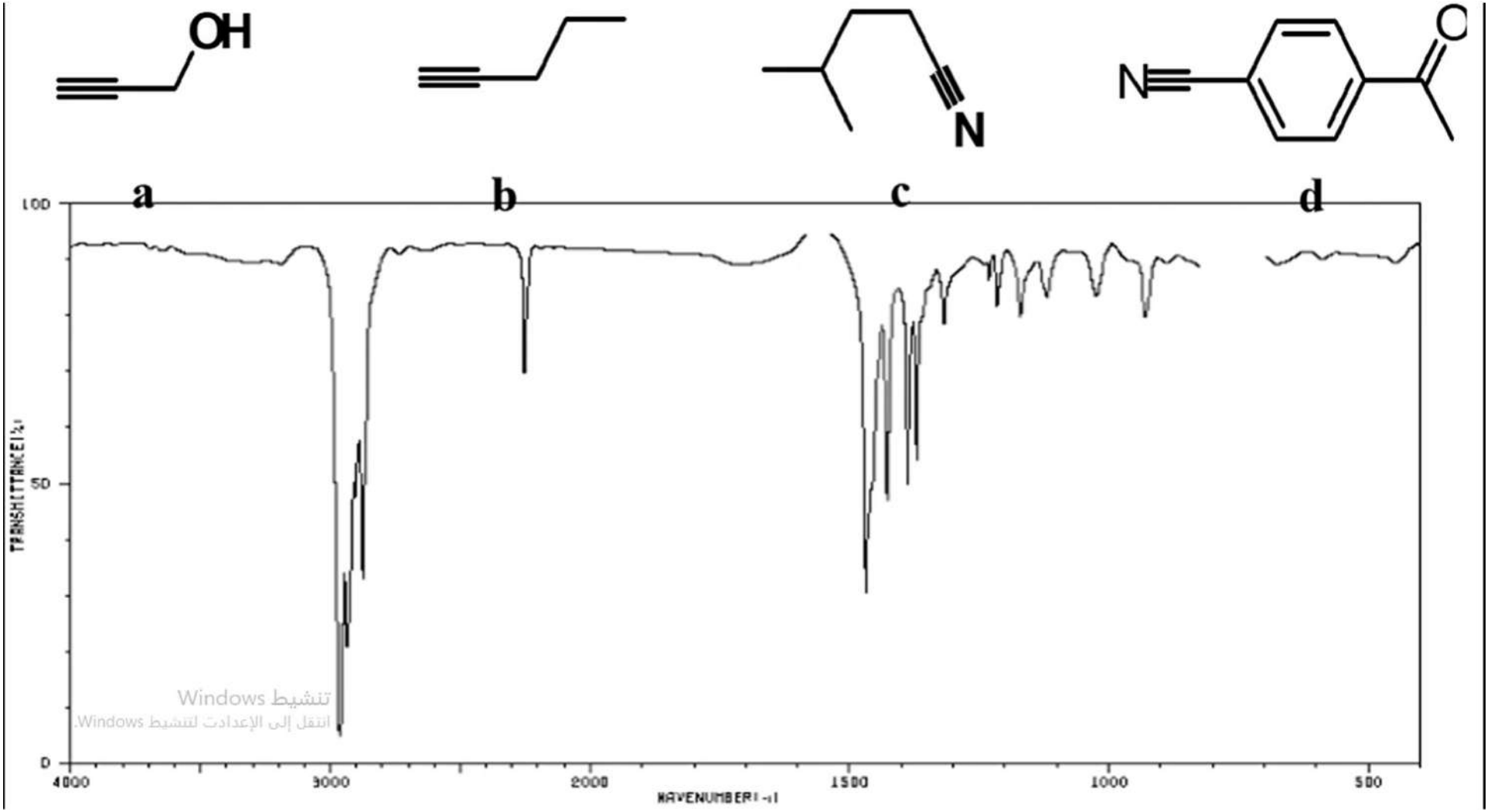
Associate each of the following IR spectra with one of the following compounds and justify your answer

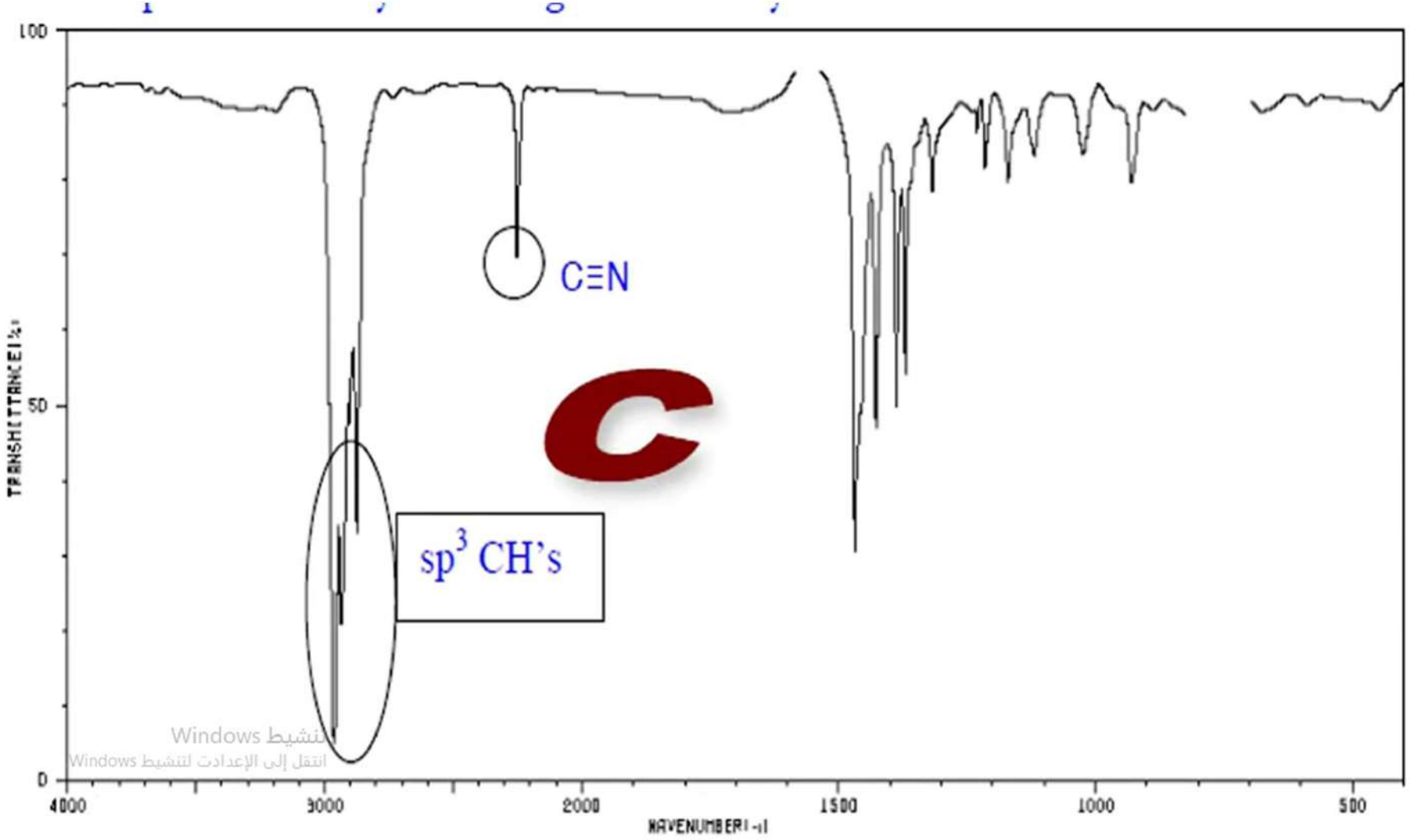

O
OH
a
OH
b
OH
c
O
d
100
50
0
TRANSMITTANCE[%]
4000
3000
2000
1500
1000
500
WAVENUMBER[-1]

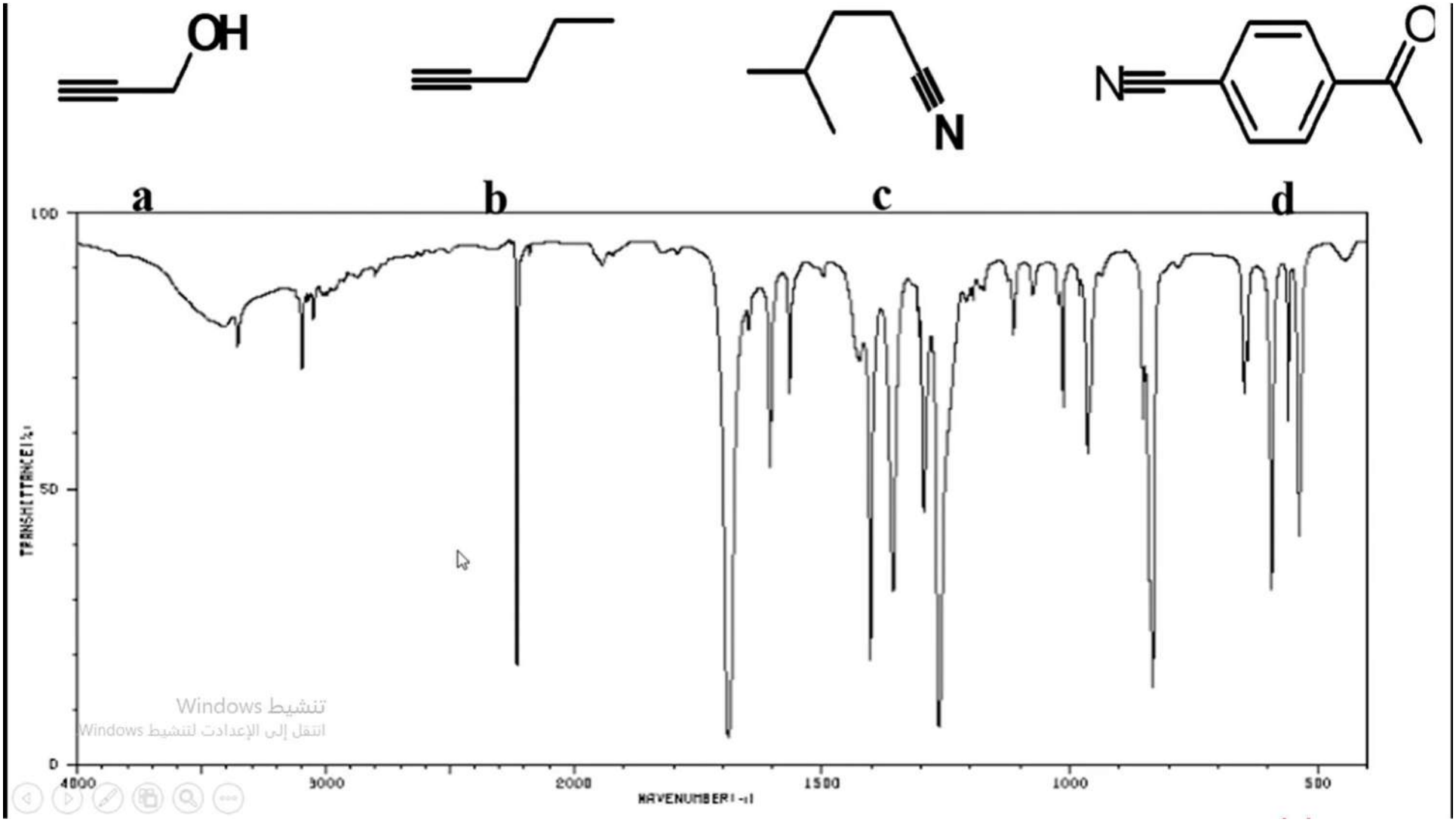


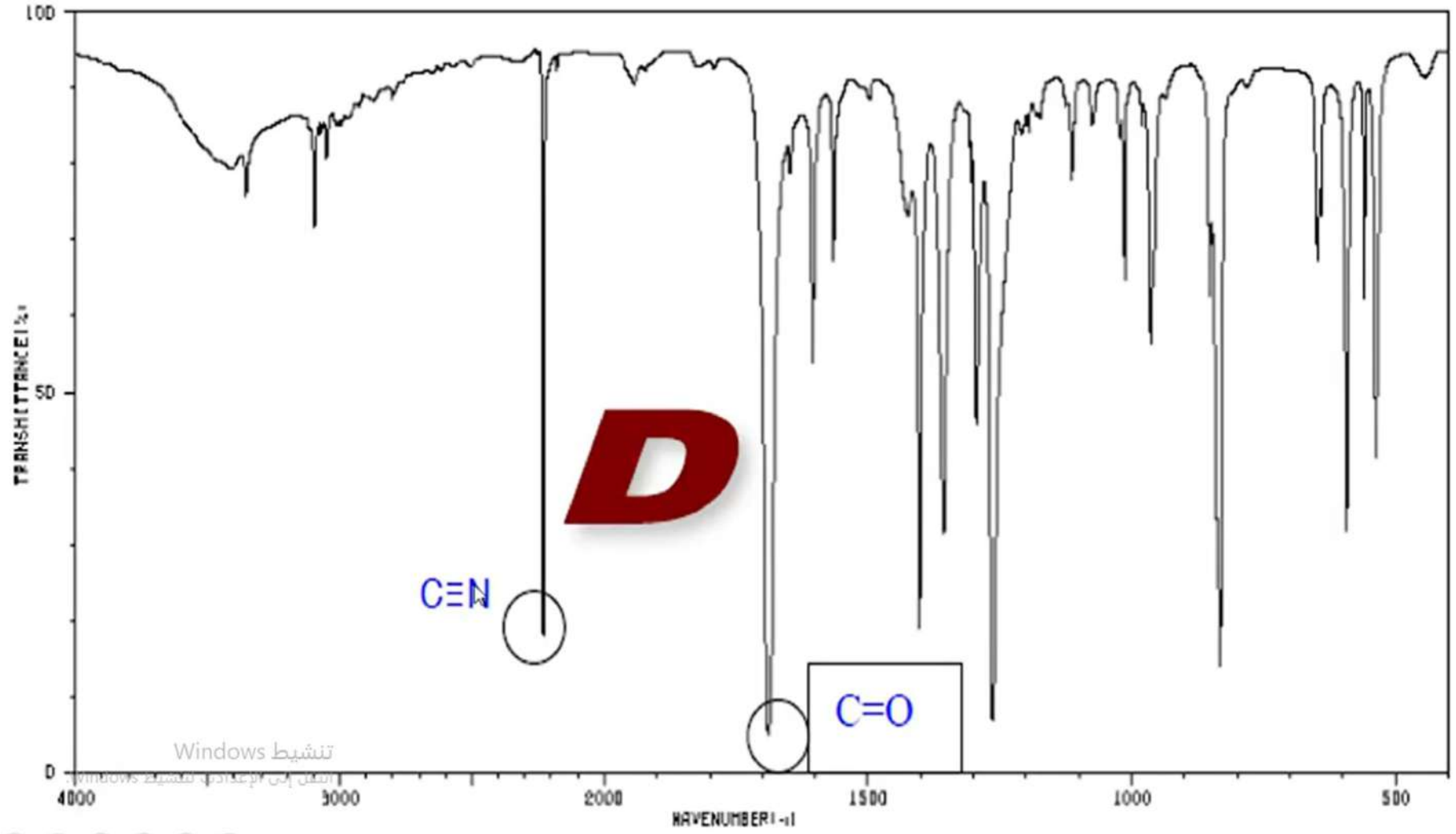

O
OH
a
OH
b
OH
c
O
d
100
50
0
4000
3000
2000
1500
1000
500
Pause (k)
Windows تنشيط
انتقل إلى الإعدادات لتنشيط Windows.

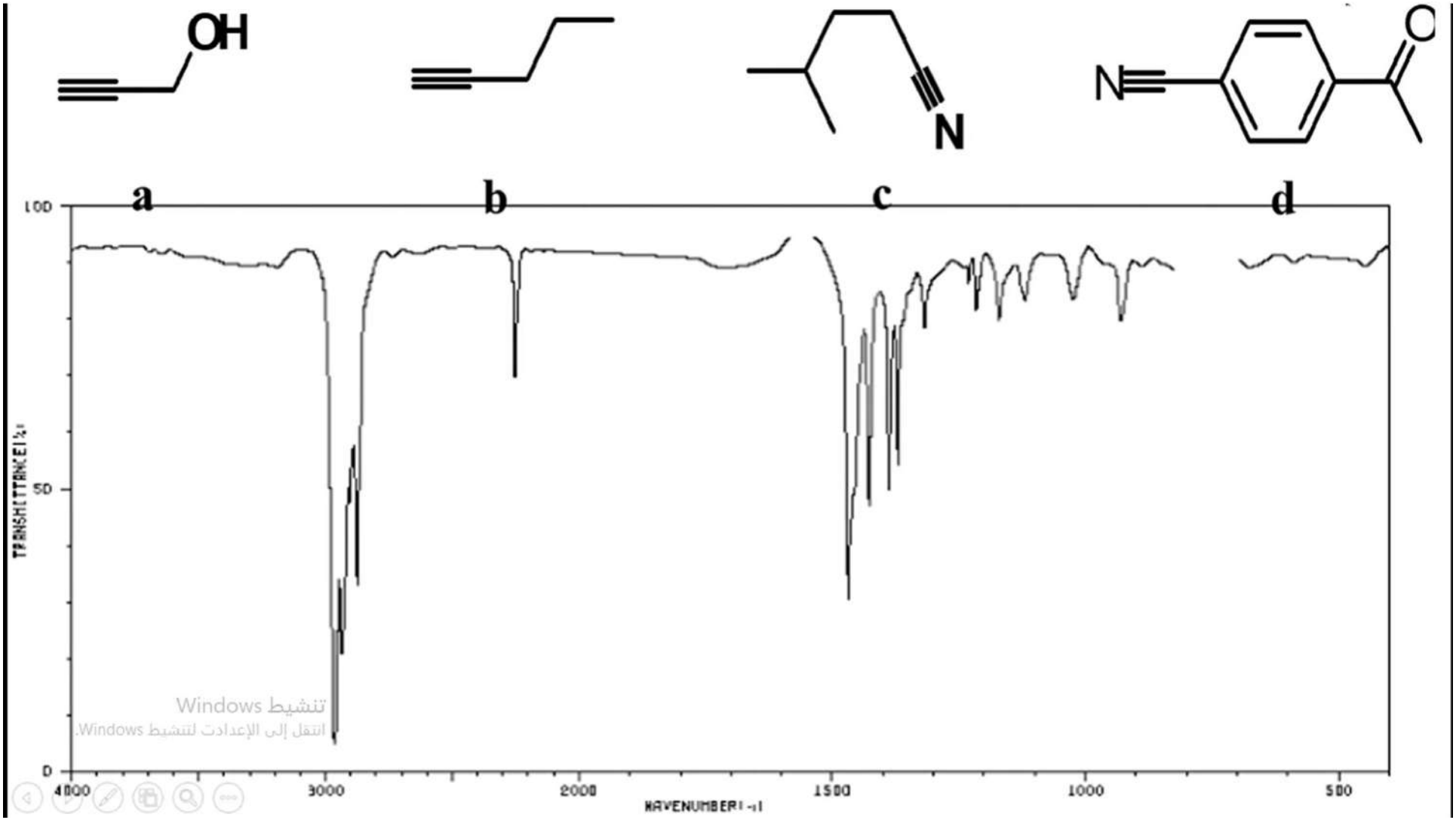

100
50
0
4000
3000
2000
1500
1000
500
OH
sp3 CH's
A
C=O

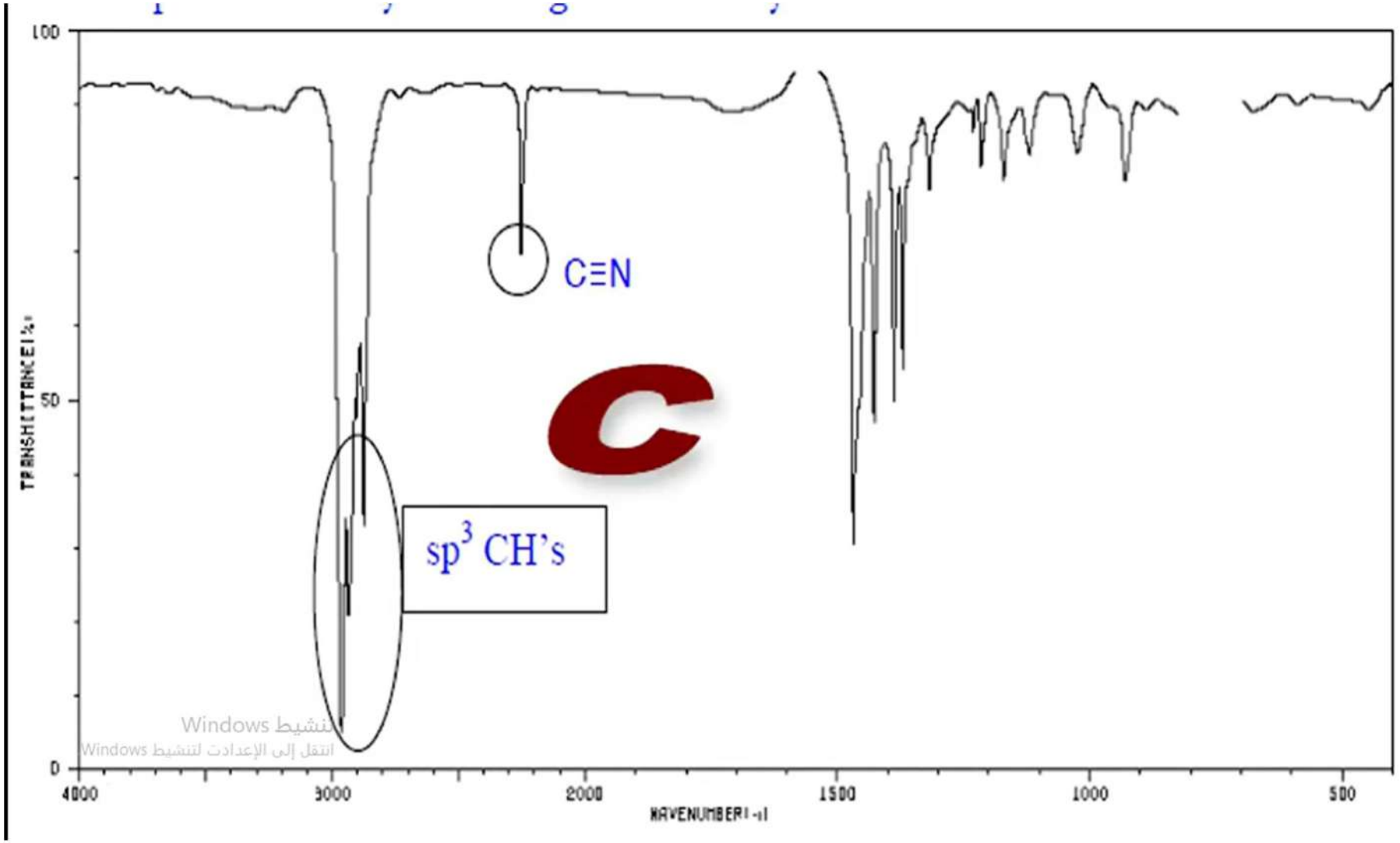

OH
N
O
a
b
c
d
100
50
0
4000
3000
2000
1500
1000
500
Windows تنشيط
انتقل إلى الإعدادات لتنشيط Windows.

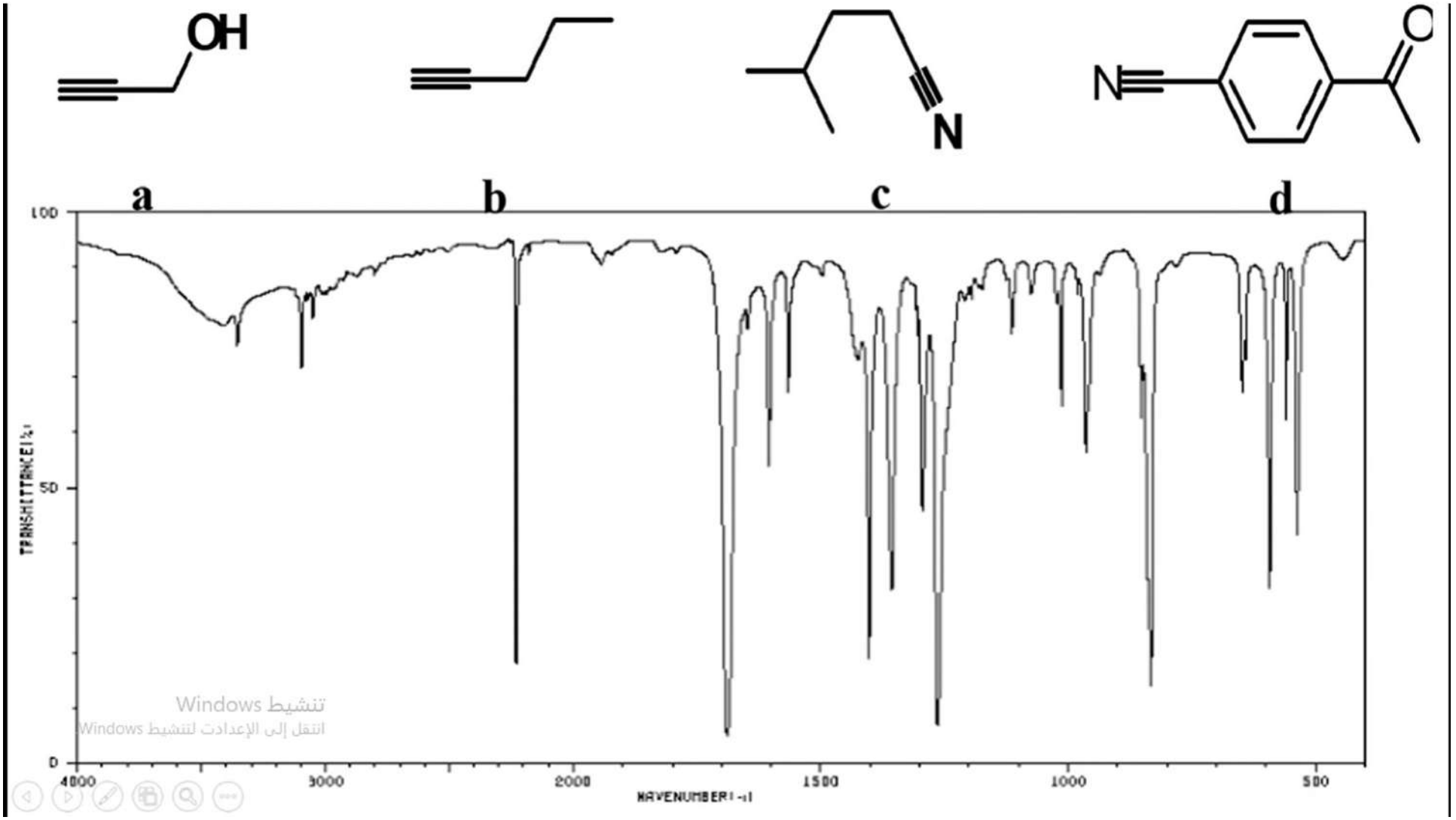

100
50
0
TRANSMITTANCE[%]
4000
3000
2000
1500
1000
500
WAVENUMBER[-1]
C≡N
sp3 CH's
C

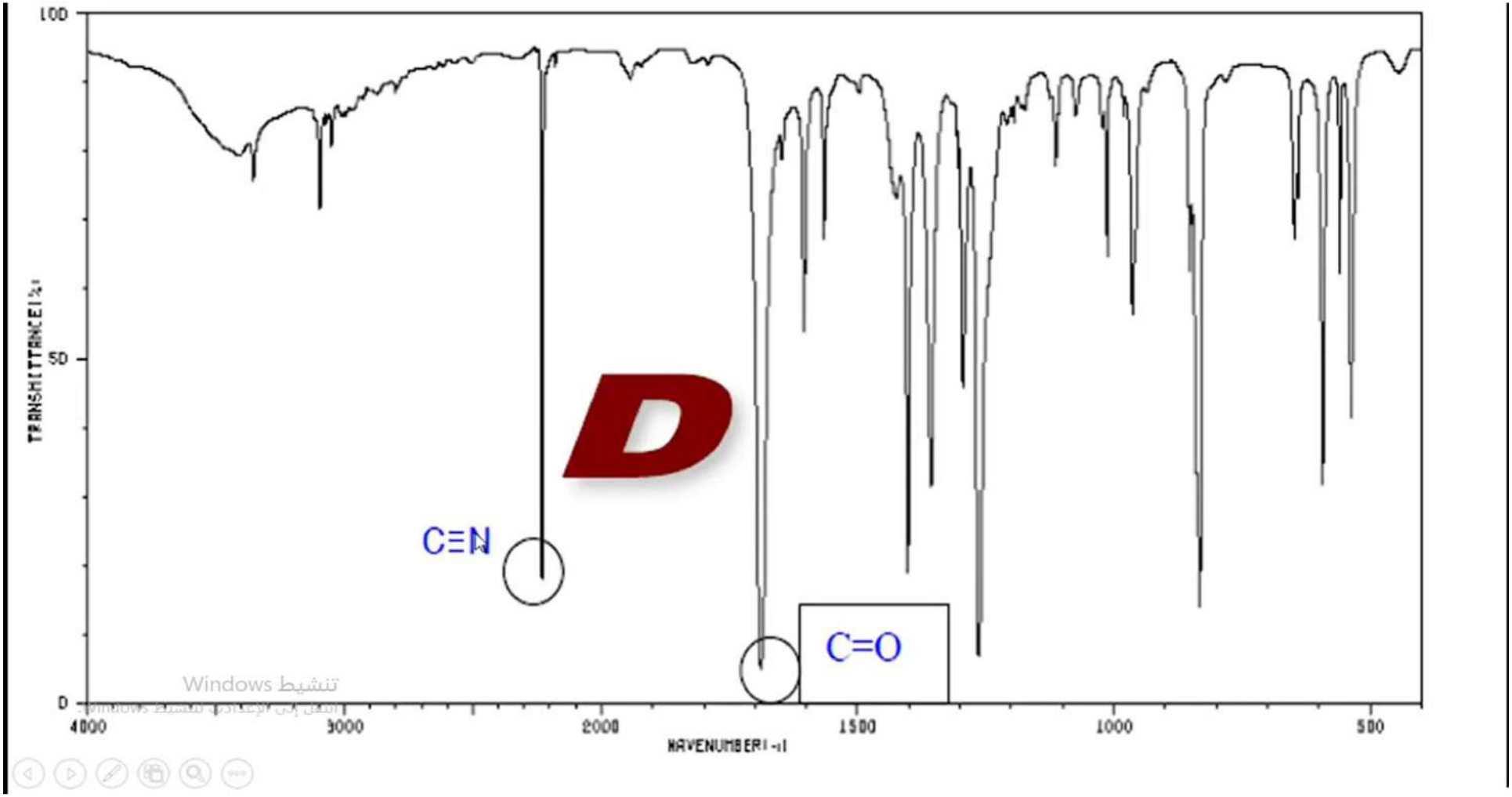

OH
N
N
a
b
c
d
100
50
0
4000
3000
2000
1500
1000
500
Windows تنشيط
انتقل إلى الإعدادات لتنشيط Windows

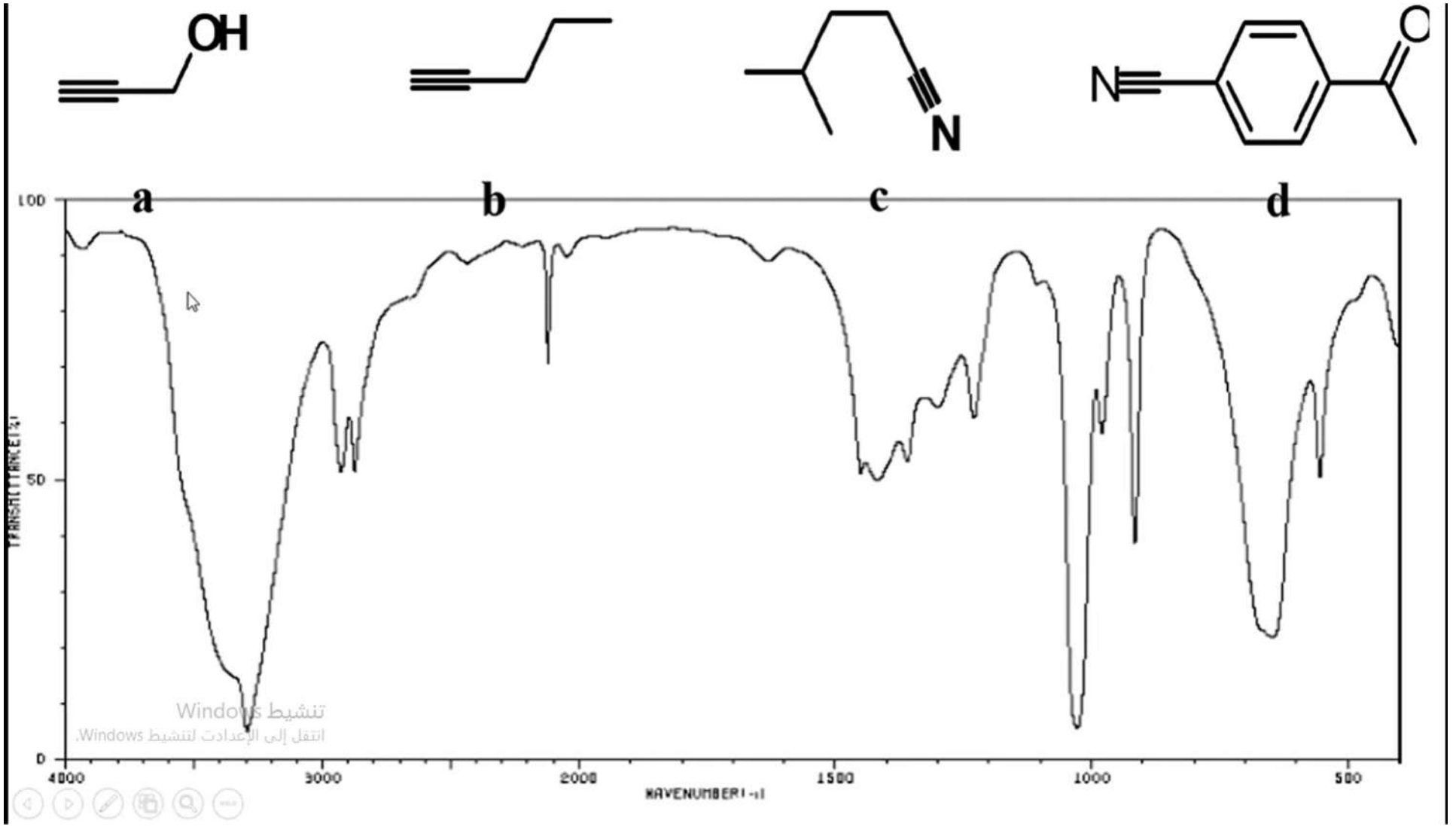

100
50
0
TRANSMITTANCE[%]
4000
3000
2000
1500
1000
500
WAVENUMBER[-1]
D
C≡N
C=O

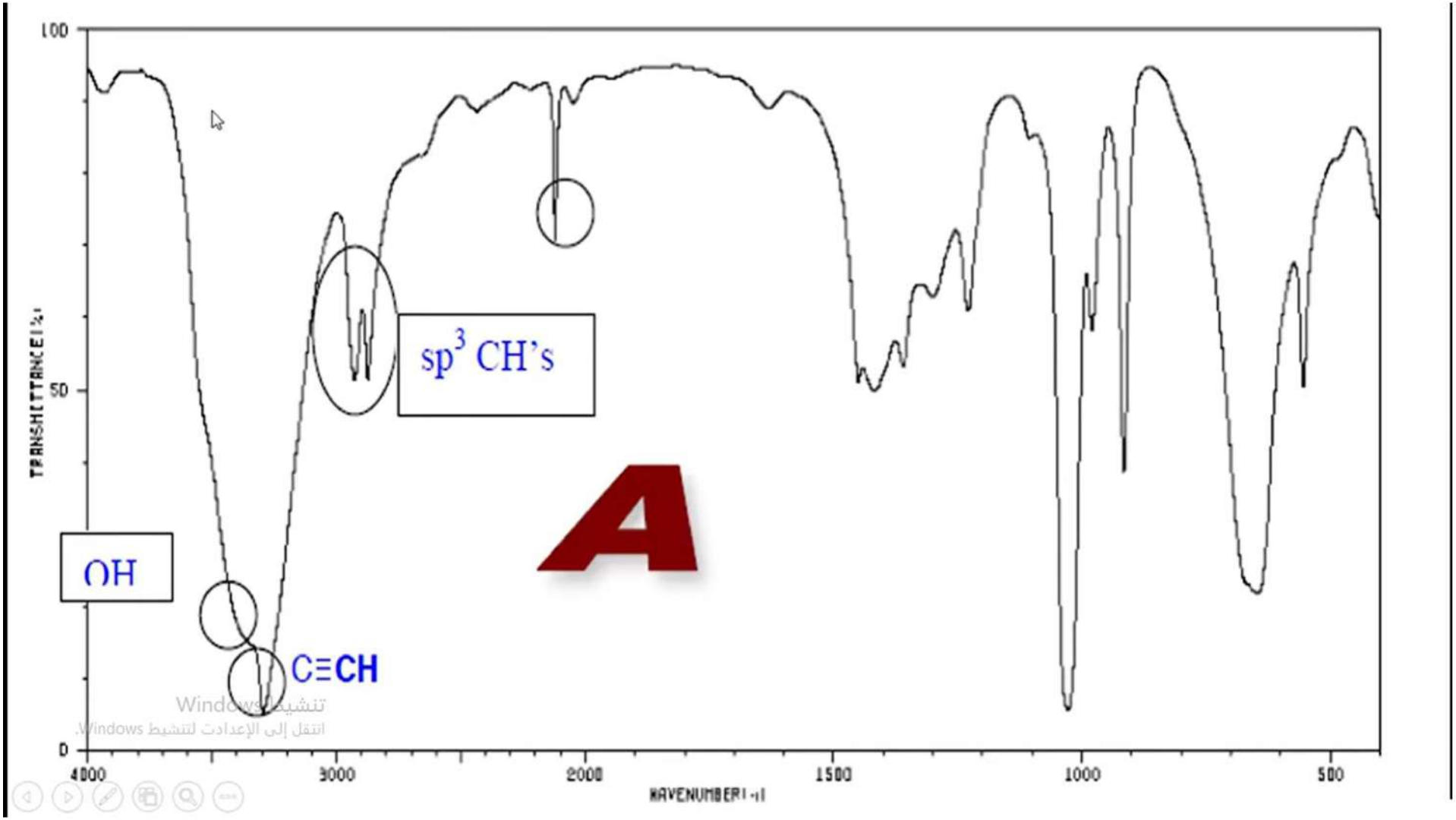

OH
N
O
a
b
c
d
100
50
0
4000
3000
2000
1500
1000
500

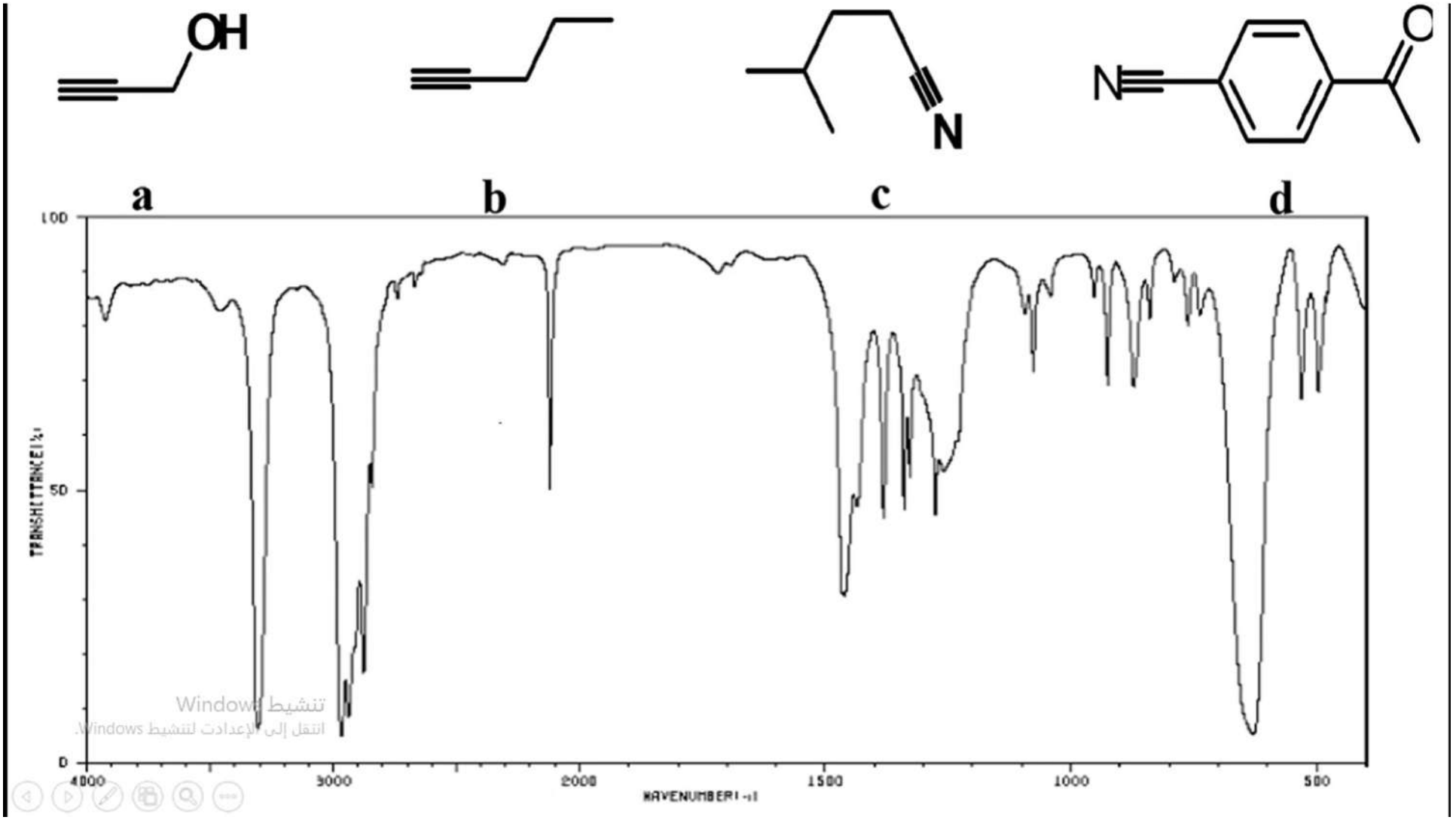

100
50
0
TRANSMITTANCE[%]
4000
3000
2000
1500
1000
500
WAVENUMBER[-1]
C≡N
C
sp3 CH's

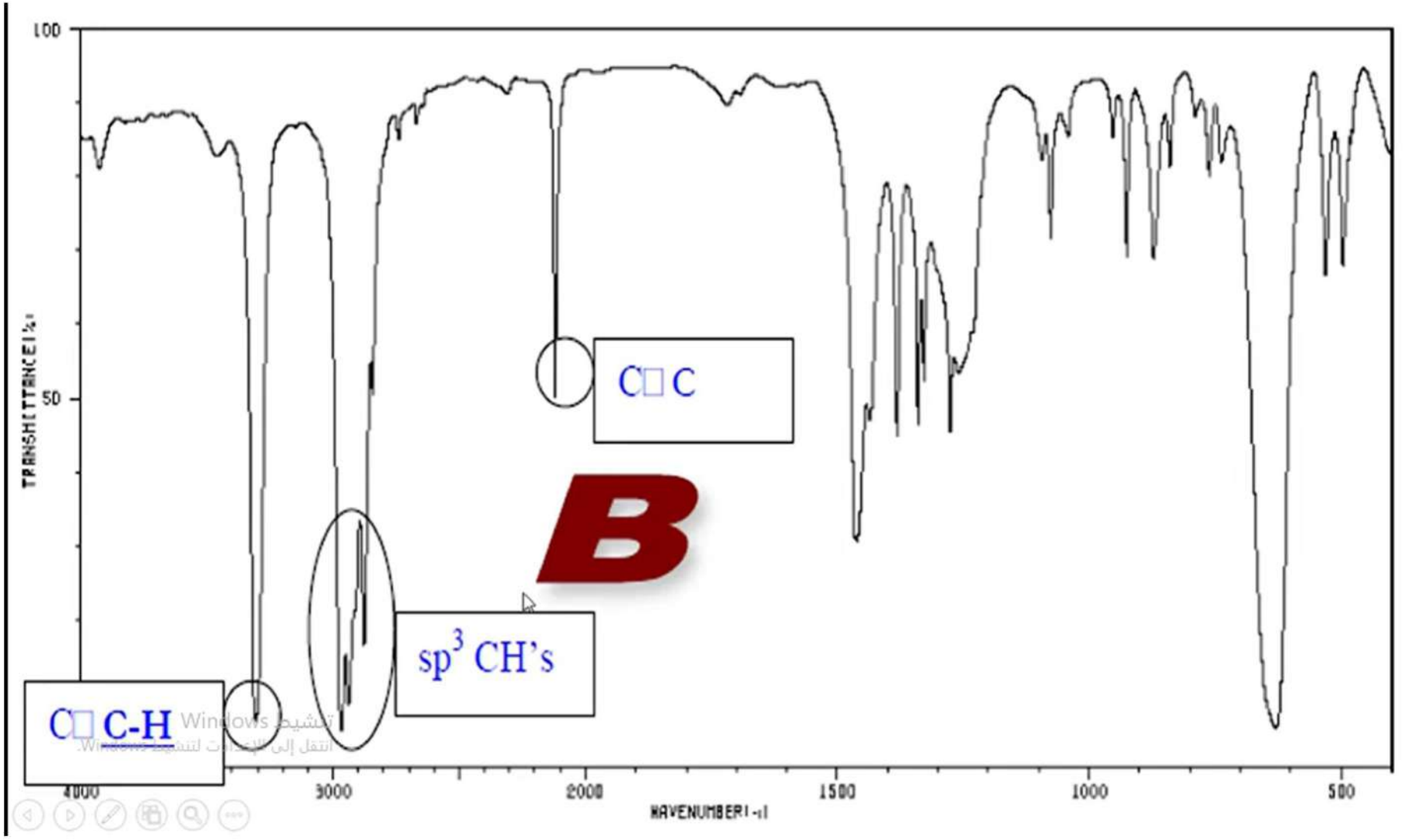

OH
N
O
a
b
c
d
100
50
0
4000
3000
2000
1500
1000
500
WAVENUMBER(-1
Windows تنشيط
انتقل إلى الإعدادات لتنشيط Windows


100
50
0
TRANSMITTANCE[%]
4000
3000
2000
1500
1000
500
WAVENUMBER[-1]
D
C≡N
C=O

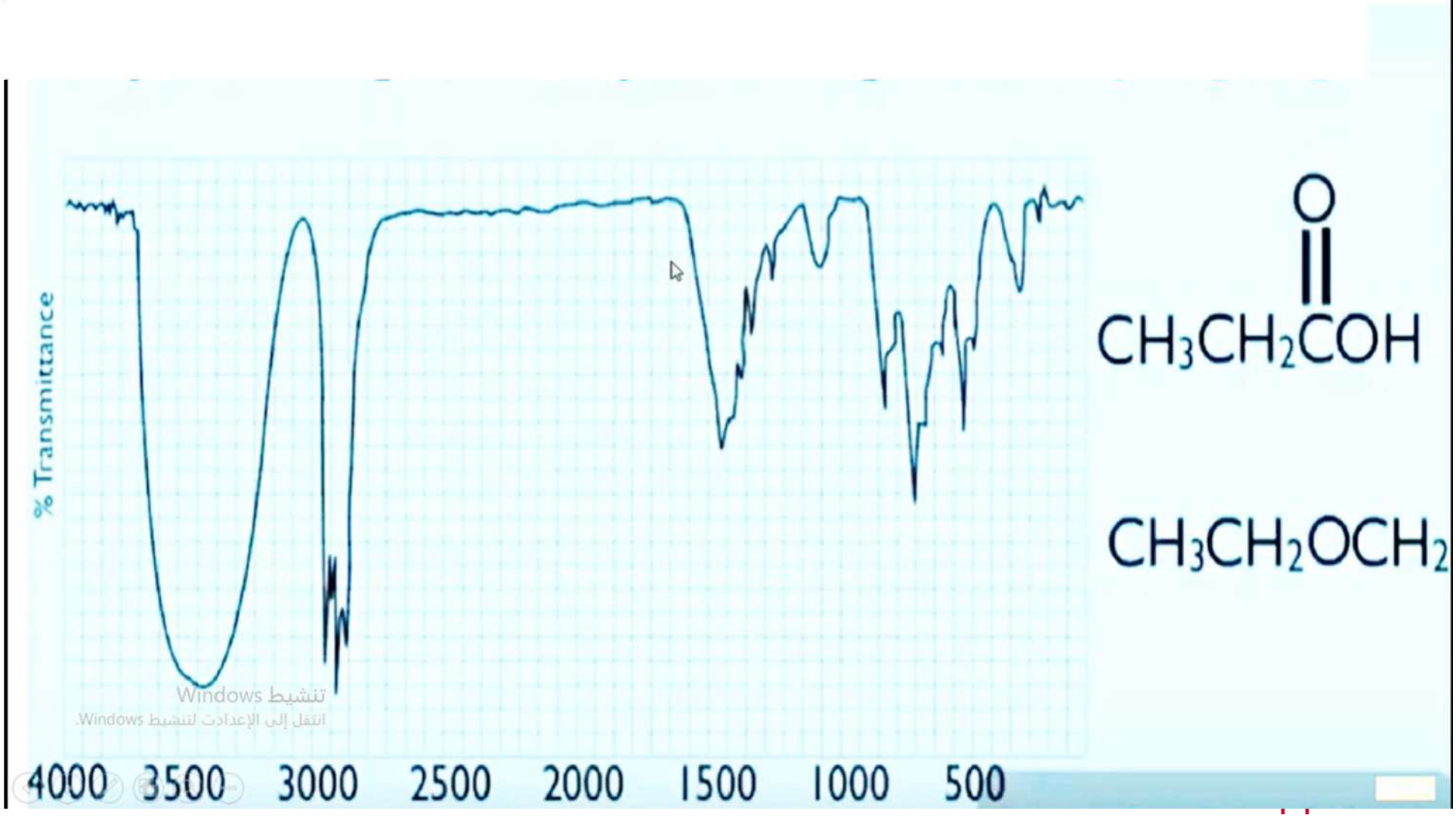

OH
N
O
a
b
c
d
100
50
0
4000
3000
2000
1500
1000
500
WAVENUMBER(-1)


100
50
0
TRANSMITTANCE [%]
4000
3000
2000
1500
1000
500
WAVENUMBER [cm-1]
OH
C≡CH
sp3 CH's
A

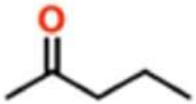

OH
N
O
a
b
c
d
100
50
0
4000
3000
2000
1500
1000
500
WAVENUMBER(-1)
Windows تنشيط
انتقل إلى الإعدادات لتنشيط Windows.


100
50
TRANSMITTANCE[%]
C□ C
B
sp3 CH's
C□ C-H
4000
3000
2000
1500
1000
500
WAVENUMBER[-1]

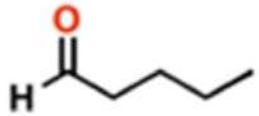
$CH_3CH{=}CH_2$ $HOCH_2CH{=}CH_2$ $HOCH_2CH_2CH_3$

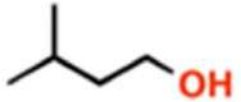


Which of these molecules best corresponds to the IR spectrum below?

a) 

b) 

c) 

d) 

e)