Pre-exam Trial (IR)

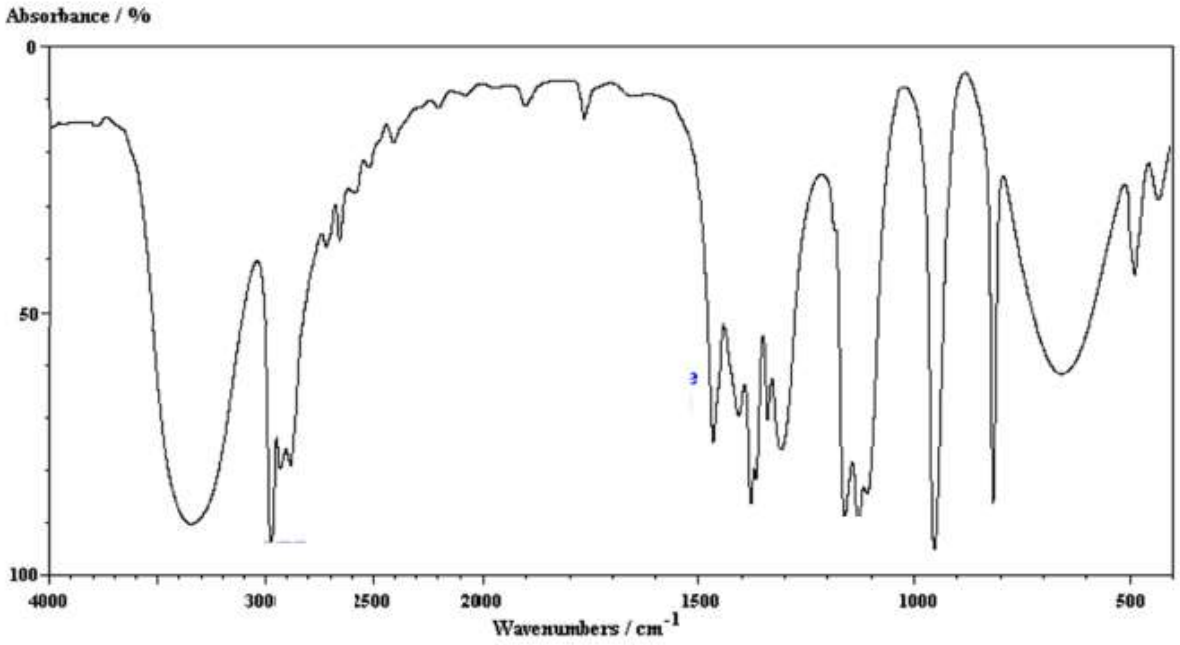
Part 1:- True and False

1- The sun light is composed of nearly thermal spectrum radiation that is slightly more than half UV
2- Metallic bonds vibrate at only certain allowable frequencies
3- When applied IR frequency is greater than natural frequency of vibration then the absorption of IR . radiation takes place and a peak is observed
4- The non-polar compounds are classified as IR active and can be detected by Raman
5- For a bond to absorb in the IR, there must be a no change in dipole moment during the vibration.
6- Factors affect the IR absorption according to Hookes law is both bond length and atomic density.
7- S-character affect atomic mass, consequently the bond strength.
8- It is easy to distinguish between paracetamol and aspirin using the IR.

Part 2:- MCQ

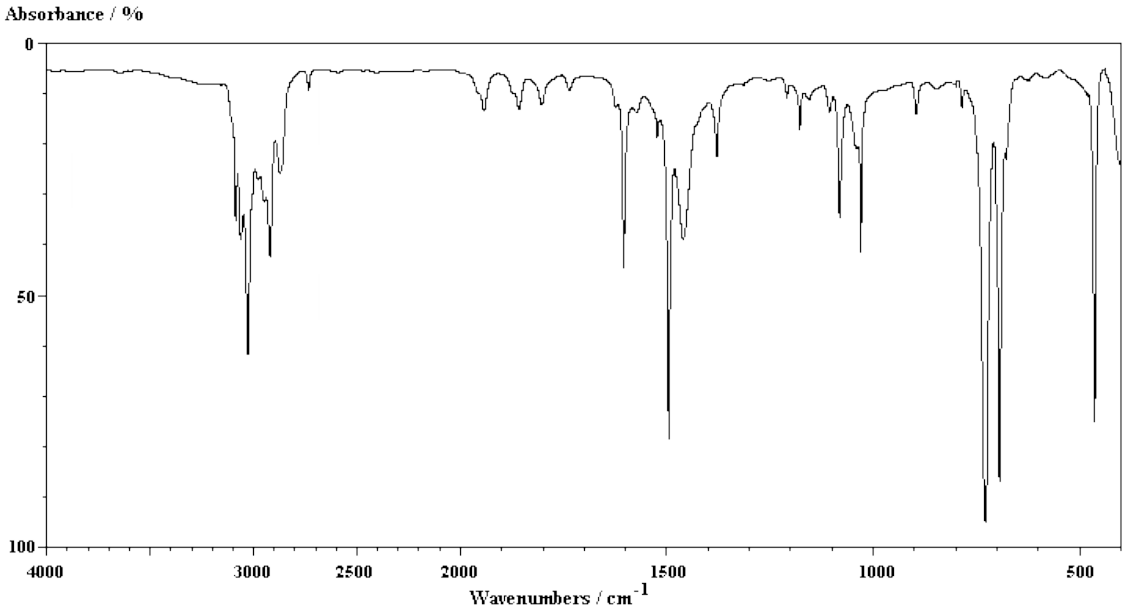
1] The following spectrum is most likely related to

a. alkene
b. ester
c. alcohol
d. alkene



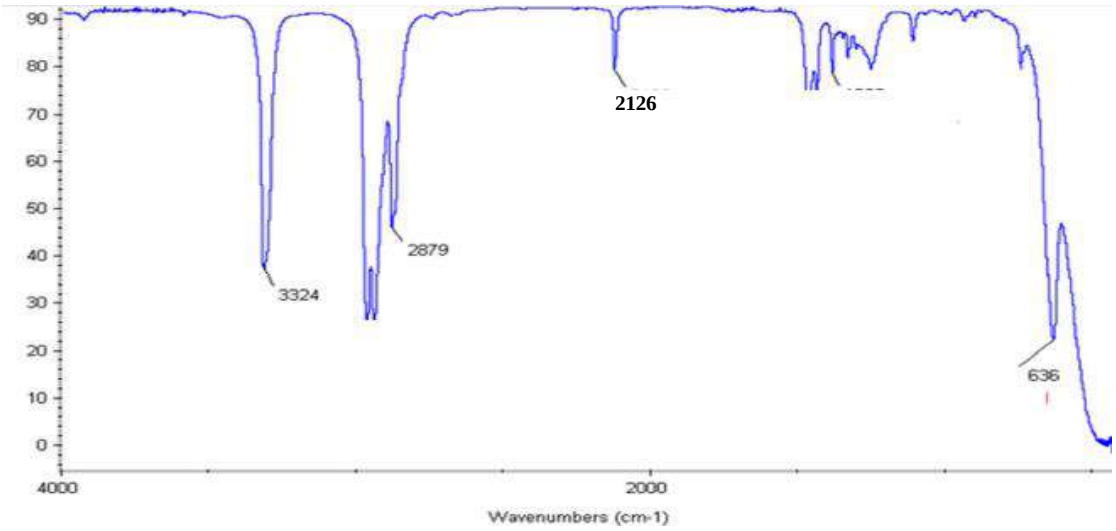
2] The following spectrum is most likely related to

a. toluene
b. cyclohexane
c. alcohol
d. nitrile



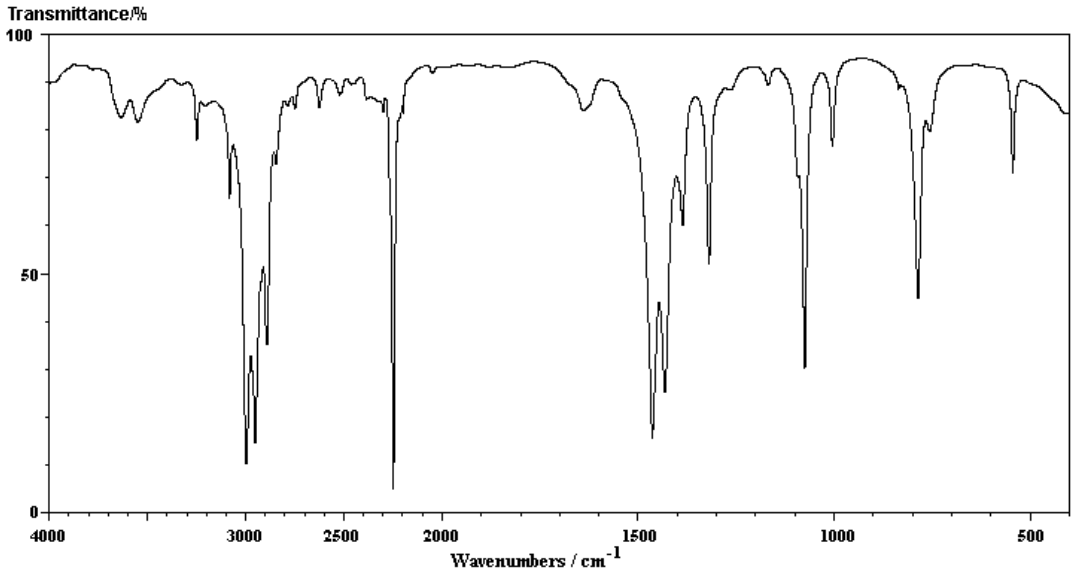
3] The following spectrum is most likely related to

a. nitrile
b. alkene
c. aldehyde
d. alkyne



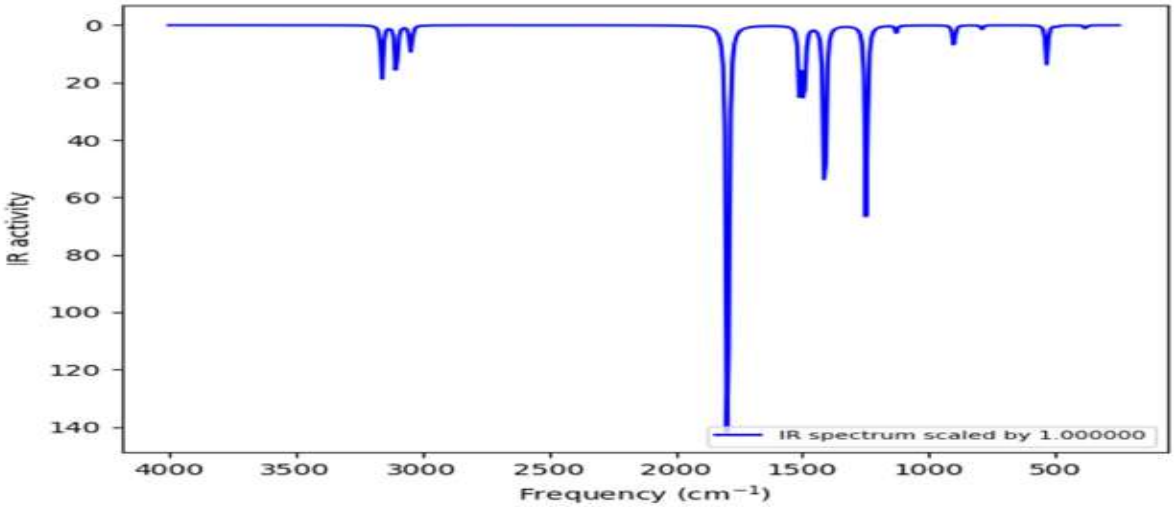
4] The following spectrum is most likely related to

a. ester
b. ketone
c. alkene
d. nitrile



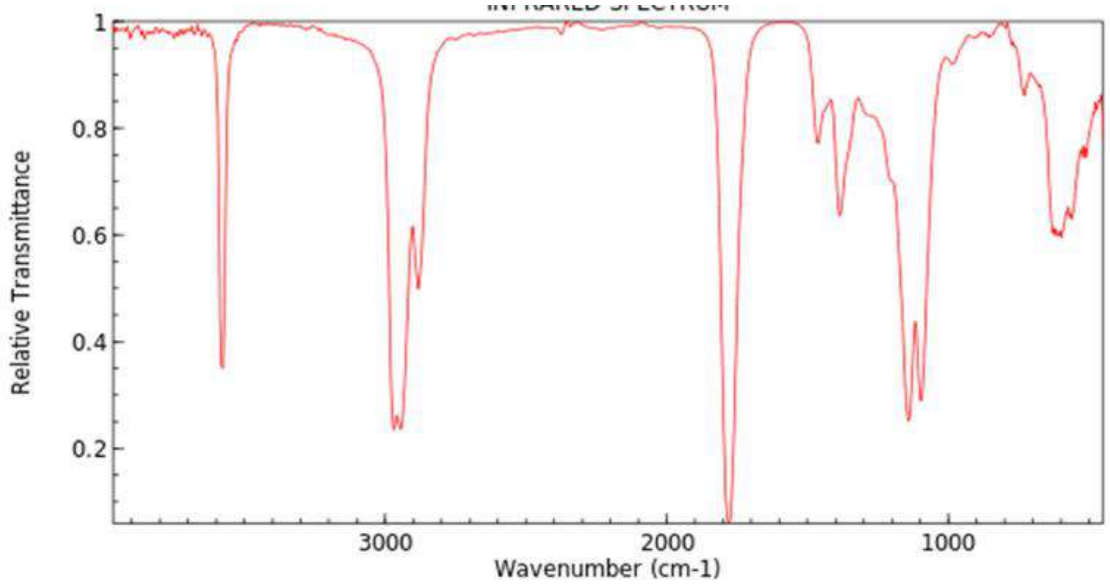
5] The following spectrum is most likely related to ……

a. aldehyde
b. ketone
c. nitrile
d. alkene



6] The following spectrum is most likely related to

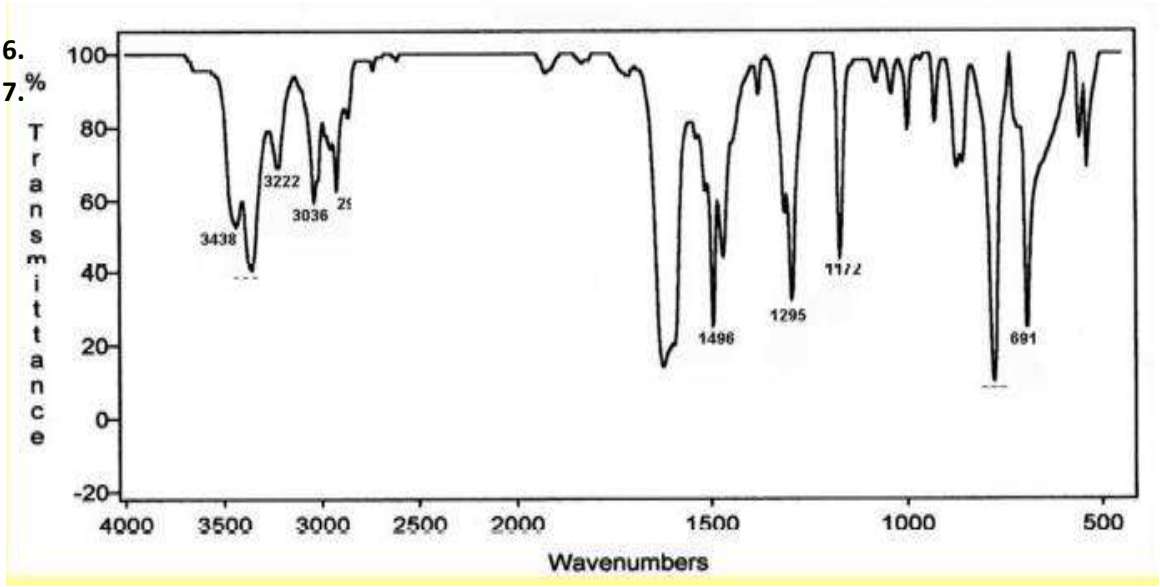
a. **Carboxylic acid**
b. **Alcohol**
c. **Ester**
d. **nitrile**



7] The following spectrum is most likely related to

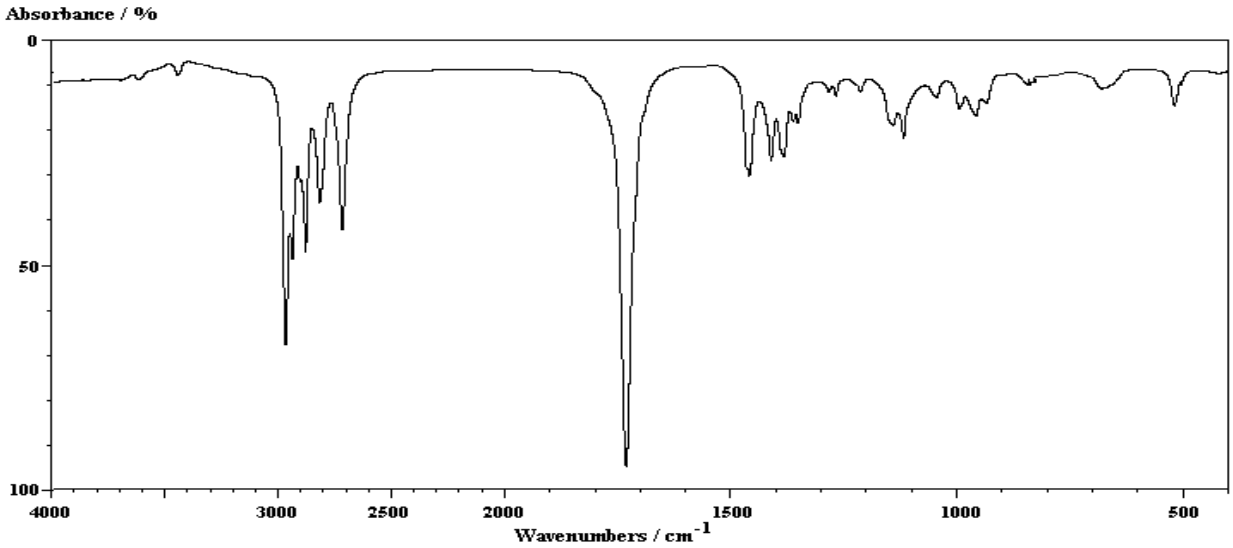
a. **Primary amine**
b. **Secondary amine**
c. **Tertiary amine**
d. **Carboxylic acid**

6.
7.



8] The following spectrum is most likely related to

a. Secondary amine
b. Alkene
c. aldehyde
d. alkyne



9] The following spectrum is most likely related to

a. benzene
b. amide
c. alkane
d. alkene