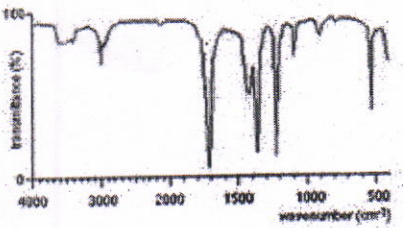
Pramukh Swami Science & H.D. Patel Arts College, Kadi
Master of Vocation Pharmaceutical Chemistry Semester-I
Internal Examination, January-2019,
(MPC-101) Analytical Instrumental Techniques
Time: 2 hours 01/01/2019 Total Marks: 60

Que-1.Answer any 12 questions. Each question carries 1 mark[12]

1. **What is absorbance?**
2. **Write the range of IR.**
   (a) 200 nm to 320 nm **(b) 700 nm to 1 mm**
   (c) 1 mm to 100 mm **(d) 380 nm to 700 nm**
3. **What are Electro-magnetic waves?**
4. **Relation between absorbance and transmittance is-**
   (a) A = 1- log%T(b) A = 2 – log%T
   (c) T = 2 – log%A(d) T = 1- log%A
5. **_____ is used as source in UV spectrometer.**
6. **Which transition have maximum energy?**
7. **Write the range of far UV light.**
8. **Which light is used in night vision camera?**
9. **Nearst Glober is used in NMR as a source. (True/False)**
10. **The Full form of FTIR is:**
    (a) Fourier-transmittance infrared spectroscopy
    (b) Fourier-transform infrared spectroscopy
    (c) Fourier-transport infrared spectroscopy
    (d) Fourier-transform infra-violet spectroscopy
11. **What is finger-print zone?**
12. **The following graph is of**



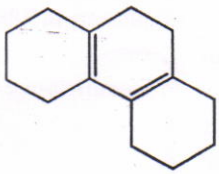
(a) NMR(b) UV Spectroscopy

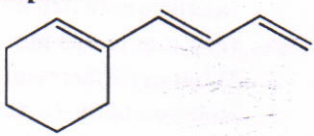
(c) IR Spectroscopy(d) Mass Spectroscopy

13. What is luminescence?

Que.2.Answer any fivequestions. Each question carries 4marks **[20]**

1. Explain the range of different IR.
2. Explain the principle of IR spectroscopy.
3. Explain the application of UV spectroscopy.
4. Explain the monochromator in detail.
5. Draw the diagram of FTIR instrument.
6. Calculate the λ_{max} of following compound

(a) 

(b) 

7. Write a note on the source of IR.

Que.3.Answer any fourquestions. Each question carries7 marks [28]

1. Explain the instrumentation of UV.
2. Explain the Lambert's and Beer's law.
3. Write a note on different type of transitions in UV.
4. Explain the type of vibrations.
5. Explain the FTIR in brief.
6. Write a note on difference between UV and IR spectroscopy.