Pramukh Swami Science & H.D. Patel Arts College, Kadi

Bachelor of Vocation Pharmaceutical Chemistry Semester-VI

Internal Examination, March-2019,

(PC-613) Advanced Analytical Chemistry-IV

Time: 2 hours 27/03/2019 Total Marks: 60

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

1. What is NMR?
2. Which compound is used as reference solvent in NMR?

   (a) DDT (b) TMS

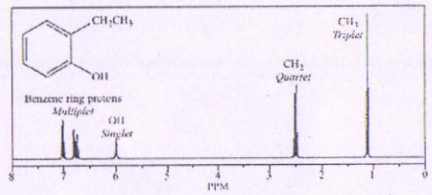
   (c) TDS (d) CCl_4
3. What is precipitation?
4. Which are the characters of colloids-

   (a) Contain Charge (b) Brownian moment

   (c) Tindall effect (d) All
5. _____ is used as source in NMR spectrometer.
6. What is gravimetric analysis?
7. Write the formula for chemical shift.
8. What is solubility?
9. Chemical composition can be determined by NMR. (True/False)
10. What is co-precipitation.
11. Which is not a type of NMR

    (a) ^{1}H (b) ^{13}C

    (c) ^{19}F (d) ^{16}O
12. The following graph is of



    (a) NMR(b) UV Spectroscopy

    (c) IR Spectroscopy(d) Mass Spectroscopy
13. What is Filtration?

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

1. Explain the equivalent and non-equivalent protons.
2. Explain the principle of NMR spectroscopy.
3. Explain Why TMS is used as reference in NMR.
4. Explain the splitting in NMR in detail.
5. What is colloid? Explain.
6. Give difference between lyophilic and lyophobic colloids.
7. Write a note filtration.

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

1. Explain the Chemical Shift.
2. Explain the Instrumentation of NMR.
3. Write a note on application of NMR spectroscopy.
4. Explain Shielding and de-shielding.
5. Explain solubility product.
6. Write a note oncleansing agents.