

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

Bachelor of Vocation Pharmaceutical Chemistry Semester- III

Mid Examination, November- 2016,

(PC 311) Advance organic chemistry

Time: 2 hours 08/11/2016 Total Marks: 60

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

- 1) What is resonance effect?
- 2) An acid is a proton-donor species. (True or false)
- 3) Which definition is true according to an acid?
 - (a) Produces H_3O^+ when dissolved in water.
 - (b) Any substance with a pH of 8
 - (c) Is bitter, has the ability to change color in an indicator, and is reactive with metal
 - (d) None of these
- 4) Classify the following compounds as an acid either base.
 ZnCl_2 , NI_3 , NaOH , CH_3COOH , Acetonitrile, HClO_4
- 5) 3° Halo alkane will follow _____ Mechanism.(SN_1/SN_2)
- 6) Define nucleophile.
- 7) Define polar protic solvent.
- 8) 1° Halo alkane will follow _____ Mechanism.(SN_1/SN_2)
- 9) Define bond length.
- 10) What is hybridization?
- 11) Draw the structure of SF_6
- 12) Which hybridization does exist in Methane?
 - (a) sp^3
 - (b) sp^2
 - (c) sp^3d^2
 - (d) d^2sp^3
- 13) Define Sigma bond and Pi bond.

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

1. Methyl amine is more basic than aniline.
2. Greater acidity of ortho and para-nitro phenol compared to meta nitro phenol.
3. Difference between E_1 and E_2 Mechanism.
4. Explain Effect of solvent.
5. Explain SP^3 hybridization in brief.
6. What is bond energy? Explain all the factors which affecting on bond energy.

Que.3. Answer any four questions. Each question carries 7 marks [28]

- 1) Short note on Inductive effect with explain in chloroacetic acid is stronger acid compared to acetic acid.
- 2) Explain SN_1 reaction with Example and mechanism.
- 3) Explain SN_2 reaction with Example and mechanism.
- 4) Explain Overlapping of Atomic orbitals.
- 5) Write a short note on Vander waals forces.