

The H. N. S. B. Ltd. Science College, Himatnagar
Internal Examination March - 2017

B.Sc. Sem.-4

Subject: Chemistry

Date: 15/03/2017

Marks: 40

Paper CC-CH-402

Time: 1½ hr

Q-1 A) Give any two answers of the Following [10]

- 1) Explain bridge bond in B_2H_6 by sp^3 hybridization
- 2) Explain bending and structure of B_6H_{10}
- 3) What is Metal hydride? Explain the classification of Metal hydride.

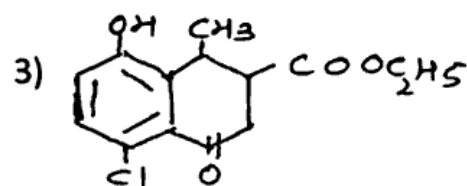
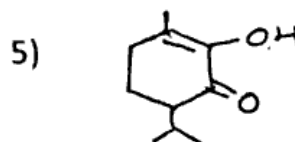
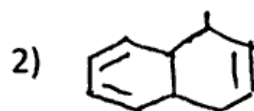
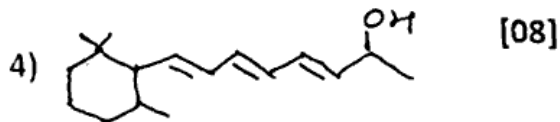
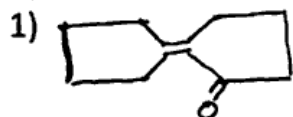
B) Give any three answers of the Following [03]

- 1) What is the IUPAC Name of B_5H_9 and B_5H_{11}
- 2) Complete the following reaction
 $B_2H_6 + NH_3 \xrightarrow{\text{low tem}} ?$
- 3) How many open in 3C-2e & close 3C-2e bond in $B_{10}H_{14}$?
- 4) Draw the Structure of B_5H_{11}

Q-2 A) Give any two answers of the Following [06]

- 1) Write short note on chromophor and oxochrome.
- 2) How will you detect geometrical isomers of stilbene with the help of U.V. spectra? Explain.
- 3) Discuss different electronic transition in U. V. spectra.

B) Calculate λ_{max} (Any Four)



6) Salicylic Acid

Q-3 A) Give any two answer of the Following [10]

- 1) Derive Nernst equation for single electrode potential.
- 2) Write a short note on "calomel electrode"
- 3) Discuss application of emf to find out equilibrium constant.

B) Answer any two shortly of the following [03]

- 1) Write a cell reaction of the following cell.
 $Zn | Zn^{+2}(a=1) || Ni^{+2}(a=1) | Ni$
- 2) Give the working principle of salt bridge.
- 3) What is electrochemical cell?