

B.Sc.(Honours) Examination, 2019
Semester-IV (CBCS)
Chemistry (Honours)
Skill Enhancing Compulsory Course: SECC-2
(Green Chemistry)

Time: Two Hours

Full Marks: 25

Questions are of value as indicated in the margin.

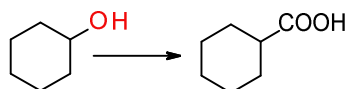
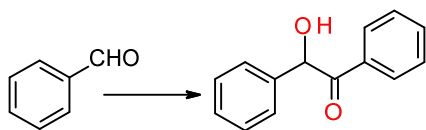
Group-A

Answer *any four* questions.

1. a) What do you mean by atom economy of a chemical reaction? Calculate the (%) of atom economy of the following reactions:
$$\text{CH}_3\text{COCl} + \text{CH}_3\text{NH}_2 \rightarrow \text{CH}_3\text{CONHCH}_3 + \text{HCl}$$
2+3=5
2. a) Explain the solid supported reactions with proper examples.
b) Solid alumina can acts as Lewis acid, Bronsted acid and base also. How can you establish the fact?1+2+3=5
3. Outline the synthesis of Ibuprofen by BOOTS and BHC companies. Which one is more green and why?2+2+1=5
4. Write short notes on:2.5x2=5
 - a) Microwave in organic synthesis
 - b) Neat Reaction in organic synthesis
5. How can you determine the efficiency of a catalyst? Explain with suitable example taking an example from stoichiometry to catalysis.5

Group-B

1. Suggest a green method for the following conversions:1+1=2



2. Complete the following reaction sequences (Identify A, B and C):1+1+1=3

