

U.G. 5th Semester Examination - 2021

**CHEMISTRY**

[HONOURS]

Discipline Specific Elective (DSE)

Course Code : CHEM(H)DSE-P-2C/PR

[PRACTICAL]

Full Marks : 20

Time : 2 Hours

*The figures in the right-hand margin indicate marks.*

1. Answer any **two** of the following: 10×2=20

a) Briefly discuss the principle of atom economy. Write down the green procedure of bromination of trans-stilbene. Also, write down the overall chemical reaction stating the materials used in this greener transformation. State, why this bromination is safer than conventional method using liquid bromine? 2+4+3+1

b) Write down the detail procedure and chemical reaction involved in the enzyme-catalyzed Benzoin condensation reaction. What is the role of thiamine hydrochloride in this synthesis? Why it is green compared to the conventional method using cyanide as catalyst? 6+2+2

*[Turn over]*

c) Write two alternative energy sources other than thermal energy used in chemical reaction? Write down the detail procedure and chemical reaction involved in the photo-reductive dimerization of benzophenone. Why the test is completely filled up with isopropanol during photo-reductive dimerization of benzophenone?

2+6+2