## **Gurudas College**

**Department of Chemistry** 

## **Internal Assessment Examination-2021**

## **SEM-VI**

## Paper: CEMG DSE-B1

(Green chemistry and chemistry of natural products)

Time: 30 Minutes

Answer any ten questions:

- Which metal is responsible for minimata disease?
  (a) Mercury (b) Lead (c) Cadmium (d) Arsenic
- 2. Which chemical is responsible for Bhopal tragedy?(a) DDT(b) MIC(c) TCDD(d) cyclohexanone
- 3. Which of the following is correct for percent atom economy?

(a) 
$$\frac{\text{Actual yield of the product}}{\text{Theoriical yield of the product}} \times 100$$
 (b)  $\frac{\text{MW of desired product}}{\text{MW of desired product} + \text{MW of waste product}} \times 100$   
(c)  $\frac{\text{FW of atoms utilized}}{\text{FW of reactants used in the reaction}} \times 100$  (d) None of these

- 4. Which of the following compounds is used for the green synthesis of adipic acid?(a) Benzene (b) Cyclohexane (c) Glucose (d) Mannitol
- 5. What is the desired product of the following reaction?

$$(a) \underbrace{\bigvee_{H}}_{H} (b) \underbrace{\bigvee_{20 \text{ min, H}_{2}O}}_{H} (c) \underbrace{\bigvee_{N}}_{H} (c)$$

- 6. The reaction of a nitroalkane with an aldehyde in presence of base is called
  - (a) Henry Reaction (b) Simmons-Smith Reaction
  - (b) Diels Alder Reaction (d) Friedel-Crafts Reaction
- 7. Write the desired product of the following reaction.

$$(a) \qquad \begin{array}{c} H_2C=CH_2/A|C|_3 \\ \hline \\ CH_{CH_2} \\ \hline \\ CH_2 \\ \hline \\ CH_2 \\ \hline \\ CH_2 \\ \hline \\ CH_2 \\ \hline \\ CH_3 \\ \hline CH_3 \\ \hline CH_3 \\ \hline \\ CH_3 \\ \hline CH_$$

Full Marks: 10

 $10 \times 1 = 10$ 

8. The following reaction is an example of



- (a) Aldol condensation
- (b) Friedel-Crafts reaction
- (c) Michael addition in solid state

(d) Michael addition in ionic liquids

9. What is the product of the following reaction?



10. The following reaction is an example of



- (a) Knoevenagel Condensation in Ionic Liquids (b) Michael addition
- (c) Knoevenagel Condensation in Solid State (d) Cannizzaro reaction
- 11. Which catalyst is used for the green synthesis of benzoin?
  - (a) KCN (b) NaCN
  - (c) AlCl<sub>3</sub> (d) 3-benzyl-4-methyl thiazolium chloride
- 12. Which reaction gives a cyclic  $\beta$ -ketoester from a diester of C<sub>6</sub> and C<sub>7</sub> dibasic acid?
  - (a) Cannizzaro reaction (b) Dieckmann condensation
  - (c) Fries rearrangement (d) Knoevenagel condensation
- 13. The following reaction is an example of



- (c) Claisen rearrangement
- (d) Fries rearrangement

- 14. What is the basic principle of combinatorial chemistry?
  - (a) Using reagent in stoichiometric amounts
  - (b) Using a catalyst
  - (c) Making a large number of compounds rapidly on a small scale in a small reaction cell
  - (d) None of these
- 15. What is the molecular formula of most natural terpenoids hydrocarbons?
  - (a)  $(C_2H_4)_n$  (b)  $(C_3H_6)_n$  (c)  $(C_4H_7)_n$  (d)  $(C_5H_8)_n$