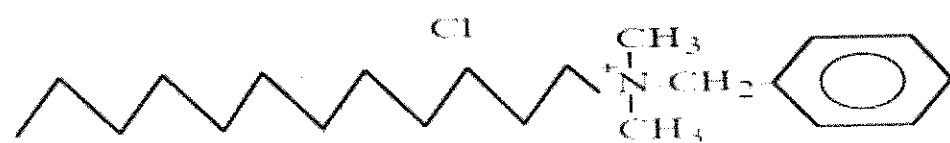


### SECTION A: ANSWER ANY TWO QUESTIONS

- 2 (a) (i) Draw the structure of C-diglycosylated flavonoid. [3 marks]  
 (ii) Outline a mechanism for the synthesis of geraniol. [10 marks]  
 (iii) Draw the structures of Butylated hydroxytoluene (BHT) and tert-butylated hydroxyquinone (TBHQ) [4 marks]  
 (b) What are the reasons of adding BHT and BHA in cosmetics? [3 marks]

- 3 (a) Which products can you formulate using the raw material with the structure shown below?



- (b) Describe the advantages and disadvantages of the cleaning agents shown below. [2 marks]

## BINDURA UNIVERSITY OF SCIENCE EDUCATION

### CHEMISTRY DEPARTMENT

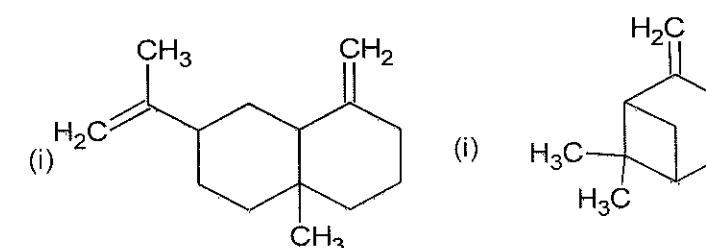
JUN 2025

### COURSE: CH217: PHYTOCHEMISTRY

2 HOURS

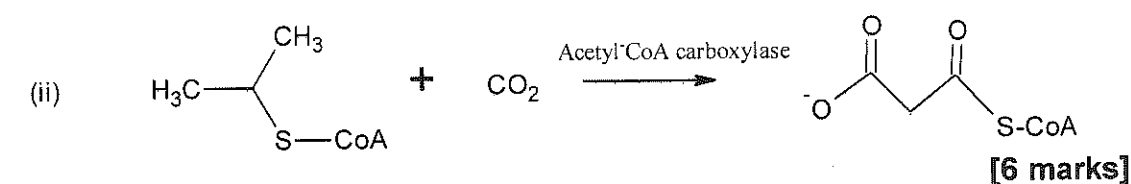
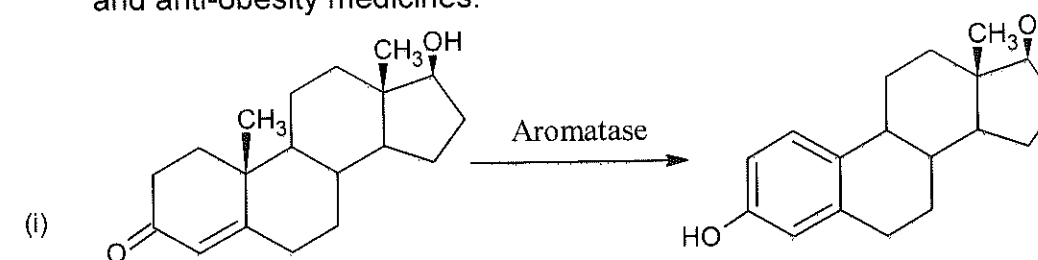
ANSWER QUESTION ONE AND FOUR OTHERS, TWO FROM EACH OF THE SECTIONS A AND B. EACH QUESTION CARRIES 20 MARKS

- 1 (a) Draw the compounds below and encircle the isoprene units.



[2 x 3 marks]

- (b) Explain how the reactions below are important in the design of anticancer and anti-obesity medicines.



[6 marks]

- (c) (i) Describe the chemistry behind the removal of scum by softening agents that are added to solid soaps. [4 marks]  
 (ii) Describe the importance of the compounds below in our diet. [4 marks]