

This question paper contains 4 printed pages]

**AI—82—2017**

**FACULTY OF SCIENCE**

**M.Sc. (Second Year) (Third Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2017**

**(CBCS Pattern)**

**ORGANIC CHEMISTRY**

**(CH-532/2)**

**(Natural Products)**

**(Monday, 13-11-2017)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time— Three Hours*

*Maximum Marks—75*

*N.B. :— (i) Attempt All questions.*

*(ii) Figures to the right indicate full marks.*

1. Solve any *three* : 15
- (a) Give synthesis of cyanidin chloride.
  - (b) Offer the constitution of  $\alpha$ -tocopherol.
  - (c) Discuss the structure of Methyl Morphol.
  - (d) Discuss structure determination of Zingiberene.
  - (e) Give the synthesis of PGE<sub>2</sub>.
2. Answer the following (any *three*) : 15
- (a) Give the synthesis of Quininic acid.
  - (b) Give detailed note on Diel's hydrocarbon.
  - (c) Give the synthesis of Querecetin.
  - (d) Discuss general methods of structure determination of anthrocyinin.
  - (e) Give the synthesis of flavour by Baker-Venkatraman method.
3. (a) What are vitamins ? Give the structure determination of vitamin C. 7

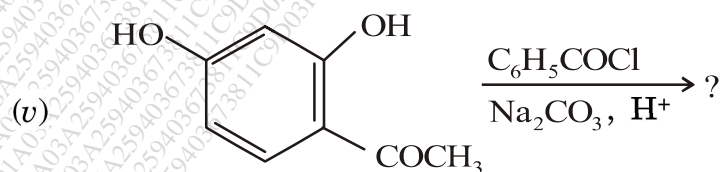
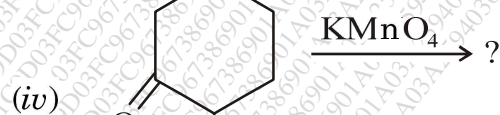
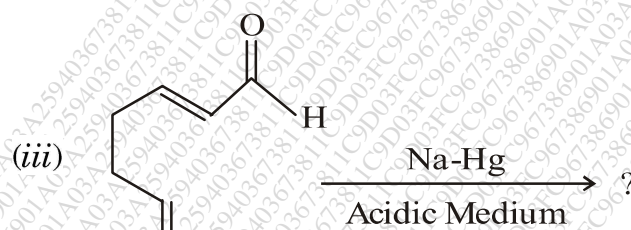
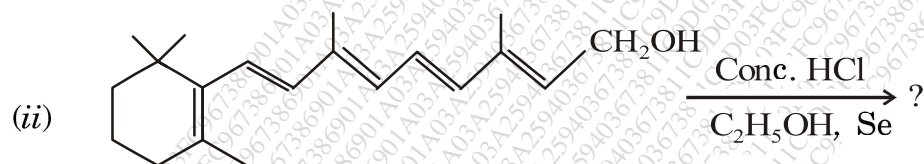
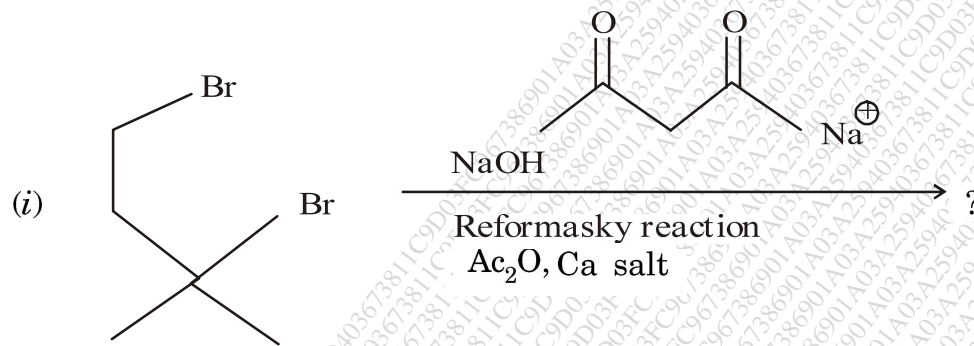
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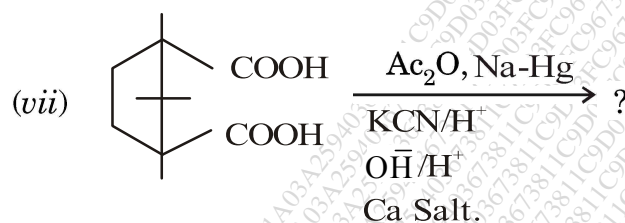
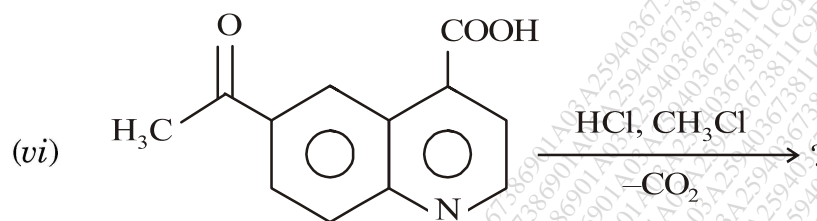
Discuss the synthesis of Bombycol.

P.T.O.

(b) Predict the products (any four) :

8





4. (a) Discuss the position of -OH group and double bond in cholesterol. 7

Or

What are pheromones ? Give their classification and role as sex attractant.

- (b) How will you convert : 8

(i) Cholesterol to Progesterone;

(ii) Cholesterol to Androsterone.

Or

Give a brief note on Rotenone.

5. (A) Select the *correct* alternative from the following : 5

(i) .....nucleus is present in flavones.

- (a) β-pyrone (b) γ-pyrone  
(c) α-pyrone (d) none of these

(ii) .....terpenoid has source papermint oil.

- (a) citral (b) abietic acid  
(c) Zingiberene (d) Menthol

P.T.O.

- (iii) .....is the molecular formula of isoprene unit.
- (a)  $C_5H_8$  (b)  $C_5H_{10}$   
(c)  $C_5H_{12}$  (d)  $C_5H_6$
- (iv) Flavones are also called as .....
- (a) Anthrocynins (b) Anthoxanthins  
(c) Phytozanins (d) None of these
- (v) Cynidin chloride on hydrolysis with HCl gives.....
- (a) Galactose (b) Glucose  
(c) Maltose (d) Ribose
- (B) Write short notes on (any two) : 10
- (i) Rotenones are natural insecticides;  
(ii) Bile acid  
(iii) Morphine.