

This question paper contains 4+1 printed pages]

AG—82—2018

FACULTY OF SCIENCE

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

OCTOBER/NOVEMBER, 2018

(CBCS Pattern)

CHEMISTRY

(CH-532/2)

(Natural Products)

(Wednesday, 28-11-2018)

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

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Attempt All questions.

(ii) Figures to the right indicate full marks.

1. Solve any *three* of the following : 15
 - (a) Offer the constitution of α -tocopherol.
 - (b) Discuss the structure of Methyl morphol.
 - (c) Write a note on Rotenones.
 - (d) Give the structure determination of Camphor.
 - (e) Give the conversion of Vitamin A₁ to Vitamin A₂.
2. Answer the following (any *three*) : 15
 - (a) Give the synthesis of Quininic acid.
 - (b) Give an account of constitution of Fernesol.
 - (c) Explain the synthesis of Flavone by Baker-Venkatraman method.
 - (d) Give the synthesis of 8'-methyl 1, 2-cyclopentanophenanthrene.
3. (a) What are vitamins ? How are they classified ? 7

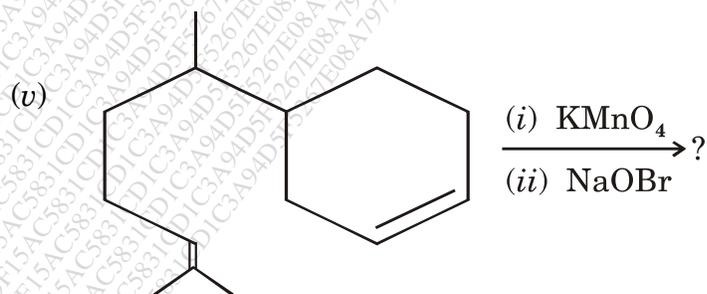
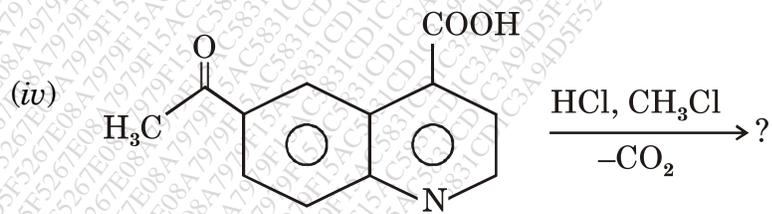
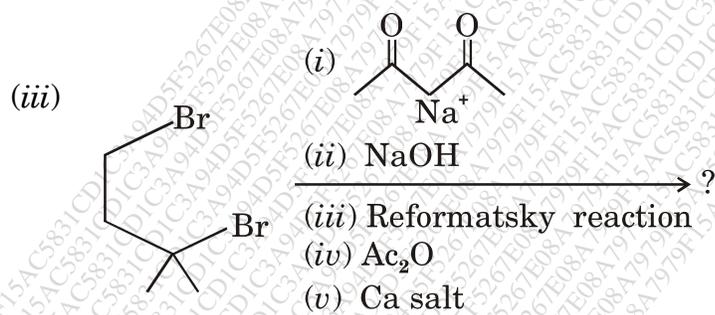
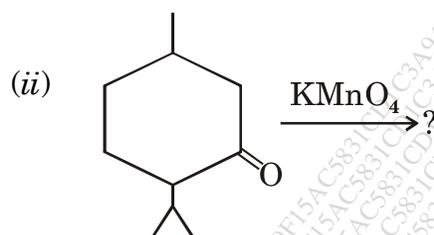
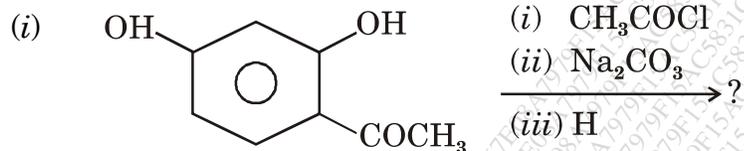
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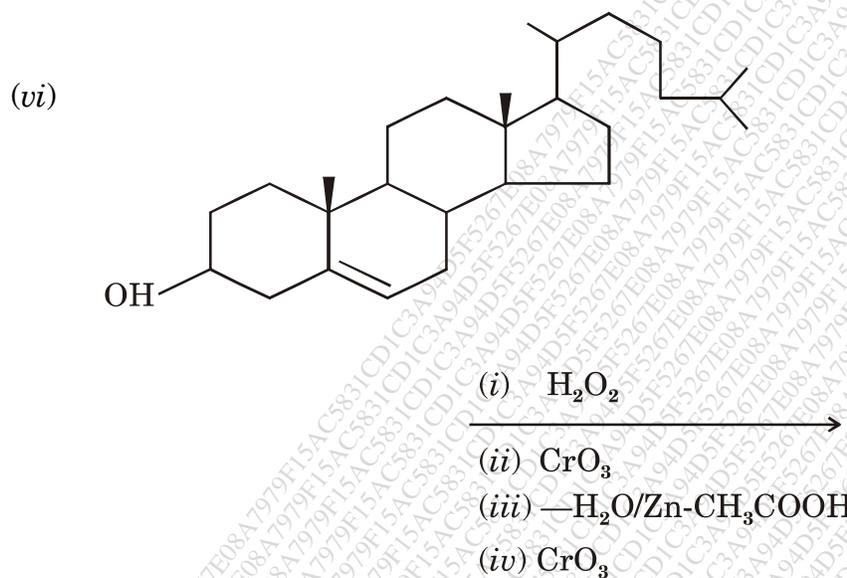
Give the synthesis of Bombycol in detail.

P.T.O.

(b) Predict the product (any four) :

8





4. (a) How will you convert :

8

(i) Diosgenin to Progesterone.

(ii) Cholesterol to Androsterone.

Or

Give the synthesis and physiological effect of PGE_2 .

(b) Explain the role of pheromones of sex attractants and for plant protection.

7

Or

Explain structure of ring system in cholesterol.

P.T.O.

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

- (i) Zingiberene is terpenoid.
- (a) di
 - (b) sester
 - (c) sesqui
 - (d) mono
- (ii) disease is caused due to deficiency of retinol.
- (a) Pellagra
 - (b) Scurvy
 - (c) Nightblindness
 - (d) All of the above
- (iii) is sex pheromones.
- (a) Undecane
 - (b) Bombycol
 - (c) 2-heptanone
 - (d) All of the above
- (iv) nucleus is present in flavone.
- (a) α -pyrone
 - (b) β -pyrone
 - (c) γ -pyrone
 - (d) All of the above

(v) Camphor exists in configuration.

(a) chair

(b) boat

(c) half chain

(d) twist boat

(B) Write short notes on (any *two*) : 10

(i) Synthesis of Ascorbic acid from L-xylose

(ii) Pheromones

(iii) Benzopyrylium chloride.