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WT—88—2024

FACULTY OF SCIENCE & TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

(CBCS/New Pattern)

ORGANIC CHEMISTRY

(OCH-512/2)

(Natural Products)

(Thursday, 12-12-2024)

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

Time—3 Hours

Maximum Marks—75

N.B. :— (1) Attempt *all* questions.

(2) Figures to the right indicate full marks.

1. Solve any *three* : 15
- (i) Discuss the structure determination of citral.
- (ii) Give the synthesis of cyanidin chloride.
- (iii) Give the synthesis of Ascorbic acid from Xylene.
- (iv) Discuss structure of methyl morphol.
- (v) Give the synthesis of PGE₂.
2. Answer the following (any *three*) : 15
- (a) Give the synthesis of Quinic acid.

P.T.O.

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(2)

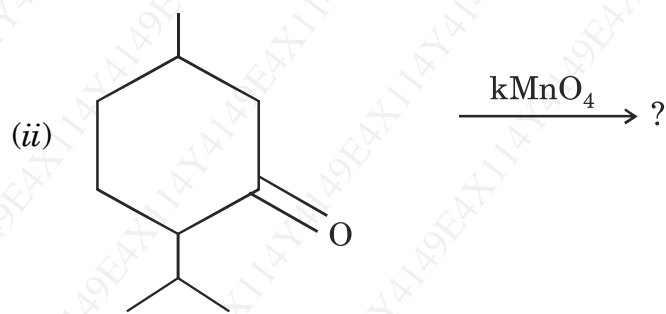
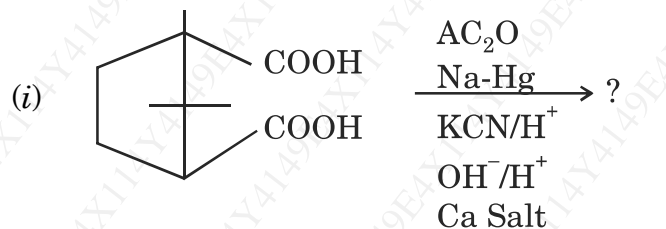
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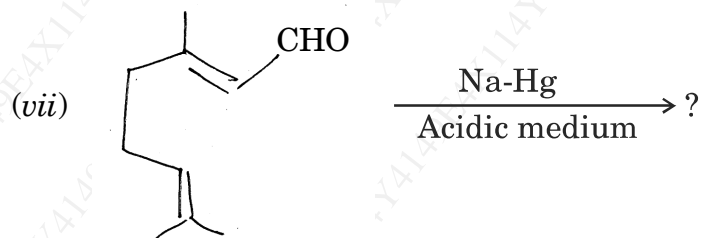
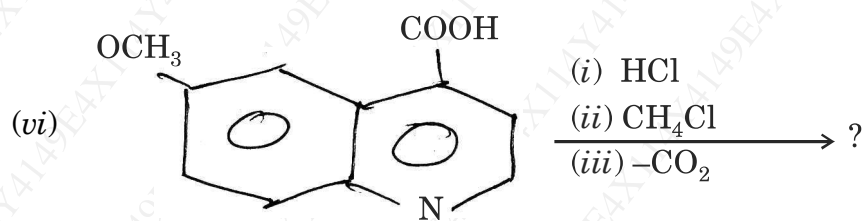
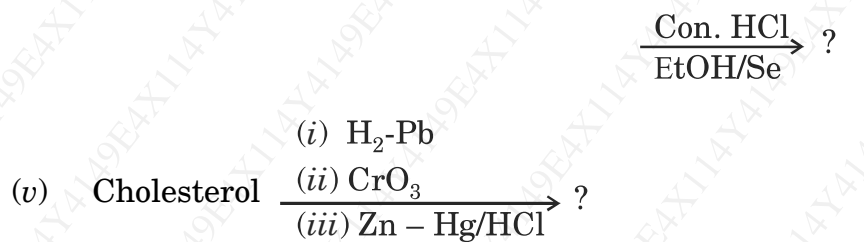
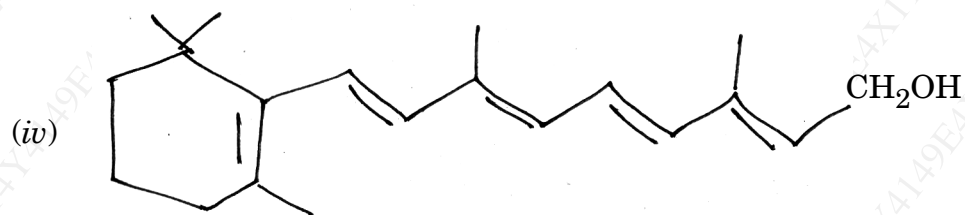
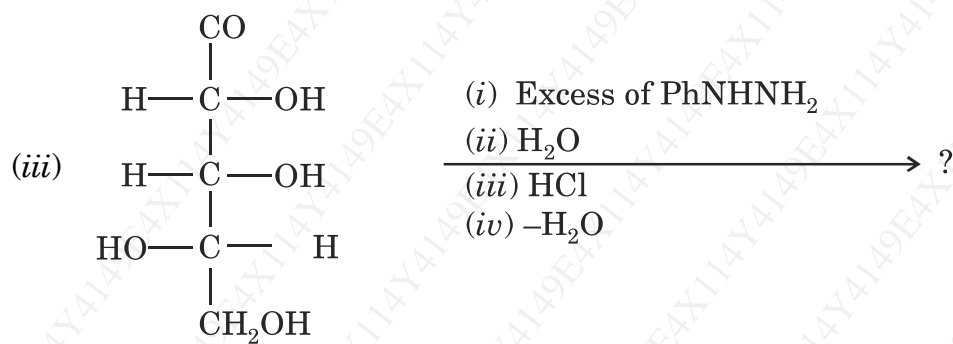
- (b) Discuss the constitution of testosterone.
- (c) Give the synthesis of Querecetin.
- (d) Discuss Diels' hydrocarbon.
- (e) Give synthesis of Camphoronic acid.
3. (A) Give the synthesis of Bombykol. 7

Or

What are Vitamins ? How are they classified ? Give the structure determination of Ascorbic acid.

- (B) Predict the product (any *four*) : 8





4. (A) Explain the structure of ring system in cholesterol. 7

Or

What are Pheromones ? Explain their types along with function.

- (B) What are Pheromones ? Give their classification and role as sex attractant for plant protection. 8

Or

How will you convert :

- (i) Cholesterol to Androsterone
(ii) Diosgenin to Progesterone.

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

(1) Zingiberene is terpenoid.

- (a) di
(b) sester
(c) sesqui
(d) mono

(2) nucleus is present in flavone.

- (a) β -pyrone
- (b) γ -pyrone
- (c) α -pyrone
- (d) None of the above

(3) Cholesterol is sterol.

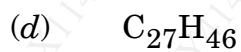
- (a) Zoo
- (b) Myco
- (c) Phyto
- (d) None of the above

(4) Cyanidin chloride on hydrolysis with HCl gives

- (a) Galactose
- (b) Glucose
- (c) Maltose
- (d) Ribose

P.T.O.

(5) M.F. of cholestane is



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

10

(a) Biosynthesis of terpenoids

(b) Quinic acid

(c) Bombykol synthesis.