

Roll No.

Total No. of Questions : 9] [Total No. of Printed Pages : 4
(2034)

UG (CBCS) IIIrd Year Annual Examination
2995

B.Sc. CHEMISTRY

(Pesticide Chemistry and Pharmaceutical Chemistry)

(SEC-4)

Paper : CHEM 308 TH

Time : 3 Hours]

[Maximum Marks : 70

Note :- Attempt *five* questions in all, selecting *one* question from each Section. Q. No. 9 of Section-E is compulsory.

Section-A

1. (a) Classify pesticides on the basis of origin and source.
- (b) What are the benefits of using natural pesticides ? 10,5
2. (a) Discuss the adverse effects of pesticides on the environment.
- (b) Explain the need of pesticides use in agriculture. 10,5

CH-295

(1)

Turn Over

Section-B

3. (a) Give method to synthesis malathion. What are its uses ?
- (b) Write notes on the following :
- (i) Gammexane
 - (ii) Chloranil 9,6
4. (a) What are Anilides ? Discuss synthesis of butachlor.
- (b) Give a method for the synthesis of carbofuran. What are its uses ? 8,7

Section-C

5. Write notes on the following :
- (i) Diazepam
 - (ii) Dapsone
 - (iii) Trimethoprim 5,5,5
6. (a) What are Antibiotics ? Give synthesis of Chloramphenicol.
- (b) How retrosynthetic approach can save time and money in drug synthesis ? 9,6

Section-D

7. Discuss the industrial production of the following using fermentation :
- (i) Citric acid
 - (ii) Vitamin B-12 8,7
8. (a) What is the general structure of penicillin ?
How will you prepare penicillin commercially ?
- (b) Discuss industrial production of Lysine (amino acid) using micro-organisms. 8,7

Section-E

9. (A) Fill in the blanks :
- (i) The slow and gradual process of accumulation of pesticides in the food chain is termed as
 - (ii) The BHC (Benzene Hexachloride) is synthesized from chlorination of in the presence of sunlight.
 - (iii) Glyceryl trinitrate (GTN) is used for
 - (iv) Glucose is converted to ethanol in the presence of

(B) State whether True *or* False :

- (i) Malathion is a quinone insecticide.
- (ii) DDT is used as herbicides in agriculture.
- (iii) Sulfacetamide acts by cyclooxygenase-2 inhibition.

(C) Choose the correct answer :

(i) Which of the following pesticides was found dangerous for bird's egg and their hatching ?

- (a) BHC
- (b) DDT
- (c) Malathion
- (d) Lindane

(ii) Phenobarbital acts by inhibition of :

- (a) GABA receptor
- (b) COX-2
- (c) Dihydrofolate reductase
- (d) DNA polymerase

(iii) Wine is produced by the fermentation of :

- (a) Carbohydrates
- (b) Proteins
- (c) Fats
- (d) Vitamins

1×10=10