

*This question paper contains 3 printed pages.*

4636

Your Roll No. ....

**B.Sc. Prog. / III**

**AS**

**IC-301 : INDUSTRIAL CHEMICALS IN  
AGRICULTURE AND MEDICINE**

**(Admissions of 2005 and onwards)**

**Time : 3 hours**

**Maximum Marks : 75**

*(Write your Roll No. on the top immediately  
on receipt of this question paper.)*

*Attempt five questions in all.  
Question No. 1 is compulsory.*

1. (a) (i) What are basic dyes? Give example. 2
- (ii) What are plastic paints? 2
- (iii) Define pigments in paints with example. 2
- (iv) Give an example of edible dye with structure. 2
- (v) Differentiate between heat retardant and fire retardant. 2
- (b) What is the purpose of making alloys? 5
  
2. (a) What is structure activity relationship? Discuss it with respect to organochlorine insecticides. 10
- (b) Give technical manufacture of urea and calcium cyanamide. 5

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3. (a) Account for the colour changes occurring when methyl orange is used as an indicator in acid-base titrations. 4
- (b) What is the difference between mordant and vat dyes? 4
- (c) Write benefits and adverse effects of insecticides. 7
4. (a) Give the industrial preparation and uses of following dyes :
- (i) Malachite green
- (ii) Indigo. 10
- (b) Give structures of following drugs/pharmaceuticals:
- (i) Acyclovir
- (ii) Neostigmine
- (iii) Paracetamol
- (iv) Methacholine
- (v) Trimethoprim. 5
5. (a) What are primary and secondary batteries? 5
- (b) Differentiate between anodic and cathodic surface coatings. 5
- (c) Write the rational synthetic approach of drug design. 5

6. (a) Write notes on following :
- (i) Argon treatment 4
  - (ii) Sulpha drugs 4
  - (iii) Enamels. 4
- (b) Explain the working of Ni-Cd battery. 3
7. (a) Explain the electric furnace method for manufacture of steel. Comment on advantages of this method. 10
- (b) Give the preparation and uses of malathion and endosulphan. 5