

- (C) How is Aspirin prepared ? Give its uses. 2½
 (D) Explain the mode of action of barbiturates. 2½
 (E) What are blockers ? How will you prepare Atenolol from DL-4-hydroxyphenyl glycine ? 2½
 (F) Explain the general mechanism of action and pharmacodynamics properties of Isoniazid. 2½
5. Attempt any **TEN** of the following : 10×1=10
- Define vatting.
 - Give the types of malachite dye.
 - In dye industry vat dye is represented by which symbol ?
 - Define the accuracy.
 - Give any two Fermenters.
 - What is precision ?
 - What is meant by representative sampling ?
 - Give the chemical name of Vitamin C.
 - Give the category of drug Tetracyclines.
 - Write the structural formula of pentobarbitol.
 - What is utility of propranolol ?
 - Write the structural formula of Ibuprofen.

NTK/KW/15/5907

Bachelor of Science (B.Sc.) Semester—V
(C.B.S) Examination

ICH—501 : INDUSTRIAL CHEMISTRY

Paper—I

Time—Three Hours]

[Maximum Marks—50

Note :— (1) All the **FIVE** questions are compulsory and carry equal marks.

(2) Draw diagrams and write equations wherever necessary.

1. (A) What are dyes ? How are they classified on the basis of textile industries application ? Give its uses.

5

(B) Give the preparation and its uses of following dyes :

(i) Methyl orange

(ii) Indigo.

5

OR

(C) How is structure of Alizarin established ? 2½

(D) How is Malachite green prepared ? 2½

- (E) Write note on Bismark Brown. $2\frac{1}{2}$
- (F) What are the requirements of good quality dye on the basis of their function ? $2\frac{1}{2}$
2. (A) Mention the difficulties in the sampling of gases. Describe the use of gas pipette for sampling of gases. 5
- (B) Define the terms :
- (i) Absolute error and
- (ii) Relative error.
- In the estimation of chromium in a sample of steel, the results of eight measurements are 15.52, 15.26, 15.62, 15.51, 15.48, 15.54 and 15.53. Calculate mean and median. 5

OR

- (C) Write short note on sampling unit. $2\frac{1}{2}$
- (D) Describe briefly the sampling of a homogenous liquid placed in a large container. $2\frac{1}{2}$
- (E) Find out the number of significant figures in the following :
- (i) 1.00367
- (ii) 1.83×10^5
- (iii) 0.0503
- (iv) 104000. $2\frac{1}{2}$

- (F) A series of Iron determination were made on a metallic sample. The observation are 7.146, 7.098, 6.942, 7.256 and 6.593. Determine average deviation from mean. $2\frac{1}{2}$
3. (A) How will you synthesize the following in the laboratory :
- (i) Penicillin-G and
- (ii) Vitamin C. 5
- (B) Give the synthesis and uses of the following :
- (i) Tetracycline and
- (ii) Vitamin B₁₂. 5

OR

- (C) Give the general principle of Fermentation process. $2\frac{1}{2}$
- (D) How is Vitamin-A synthesized industrially ? $2\frac{1}{2}$
- (E) How will you distinguish Penicillin-G and Penicillin-V ? $2\frac{1}{2}$
- (F) Give the preparation and properties of Vitamin B₆. $2\frac{1}{2}$
4. (A) Give the synthesis of chloramphenicol. Explain the mode of action, effect and uses. 5
- (B) What are barbiturates ? How are they classified on the basis of hypnosis ? How will you prepare barbituric acid from urea and malonic ester ? 5

OR