

KNT/KW/16/5192

Bachelor of Science (B.Sc.) Semester—V (C.B.S) Examination**INDUSTRIAL CHEMISTRY****Paper—1 (ICH—501)**

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) All the **five** questions are compulsory and carry equal marks.

(2) Draw diagrams and write equations wherever necessary.

1. (A) What are triphenyl methane dyes ? How is malachite green prepared ? Give its uses. 5
- (B) Give the preparation and uses of following dyes :
- (i) Alizarin, and (ii) Indigo. 5

OR

- (C) What are mordant dyes ? How are they applied to fabric ? 2½
- (D) Give the industrial preparation of Bismark Brown. 2½
- (E) Discuss the classification of dyes on the basis of their application. 2½
- (F) Give the preparation and uses of methyl orange. 2½
2. (A) What is sampling ? Explain the techniques used in sampling of liquids and gases. 5
- (B) Define the following :
- (i) Absolute error, and
- (ii) Relative error.

Calculate absolute error and relative error in the following set of observations if true value is 0.23.

0.23, 0.20, 0.21, 0.20, 0.24. 5

OR

(C) How will you distinguish between accuracy and precision ? 2½

(D) Explain the techniques of solid sampling. 2½

(E) Find out the number of significant figures in the following :

(i) 1.00367

(ii) 1.83×10^5

(iii) 0.0503

(iv) 104000. 2½

(F) Explain the collecting and processing data for sampling. 2½

3. (A) Give the preparation and uses of following :

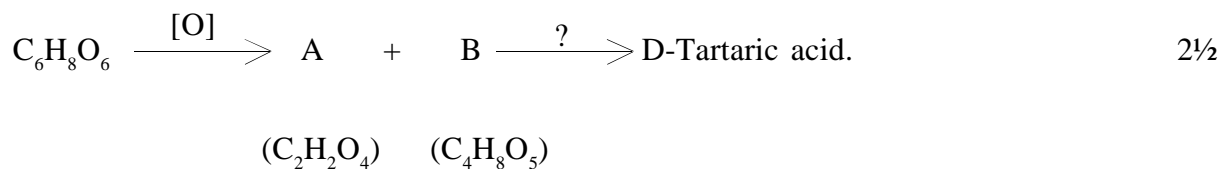
(i) Tetracycline

(ii) Vitamin-B₆. 5

(B) Give the methods of synthesis and applications of Vitamin—A. 5

OR

(C) Complete the following sequence of reaction of Ascorbic acid :



(D) What are antibiotics ? Give the uses of penicillin-G. 2½

(E) Write notes on Fermentation process. 2½

(F) Give the synthesis of Vitamin-B₁₂. 2½

4. (A) What are barbiturates ? How are they classified on the basis of hypnosis ? How will you synthesize barbituric acid from urea and malonic acid ? 5

(B) Define analgesic drug. Give the synthesis and uses of Aspirin. 5

OR

(C) Give the synthesis of chloromphenicol. 2½

(D) What are blockers ? How will you prepare Atenolol from DL-4-hydroxy phenyl glycine ? 2½

(E) Give the laboratory preparation of Isoniazid. 2½

(F) Give the properties and uses of Ibuprofen. 2½

5. Attempt any **TEN** of the following :

(i) Write the name of any two fabric brighteners.

(ii) What happens when indoxyl is subjected to aerial oxidation ?

(iii) Define edible dye.

(iv) What is precision ?

(v) What is meant by bulk ratio ?

(vi) What is random errors ?

(vii) Write the chemical name of Vitamin-C.

(viii) Write any two Fermenters.

(ix) What is deficiency of Vitamin-A ?

(x) Write the structural formula of Ibuprofen.

(xi) What is meant by anti-microbial agent ?

(xii) Define Hypnosis.

1×10=10