



NAO-003-001648 Seat No. _____
B. Sc. (Sem. VI) (CBCS) Examination
March / April - 2017
Industrial Chemistry : IC-603
(Pharmaceuticals-2 & Fundamental of
Chemical Engineering-2)

Faculty Code : 003
Subject Code : 001648

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :**
- (1) All the questions are compulsory.
 - (2) Figures to the right indicate maximum marks.
 - (3) Draw labeled diagram wherever necessary.
 - (4) Assume suitable data.
 - (5) Question-1 : Each question carries 1 mark objective type question.
 - (6) Question-2 & 3 : Each question carries 25 marks.

- 1
- (1) Define the term transfer function. **20**
 - (2) What do you mean by the term offset?
 - (3) Define measured variable.
 - (4) Define the term steady state control process.
 - (5) What is wear resistance?
 - (6) Enlist any two objectives for development of a plant project.
 - (7) Write a short note on slurry phase reactor.
 - (8) Define TLV.
 - (9) Give full form of NIHL.
 - (10) Write effect of manganese dust on human body.
 - (11) The non-sugar residue in Glycoside is known as?

- (12) Define : Pyrogen.
- (13) Give IUPAC name of isoprene.
- (14) Give one example of bicyclic terpenoid.
- (15) Methyldopa is an example of _____ drug.
- (16) Define : Therapeutic Index.
- (17) Who was known as the father of Modern Chemotherapy?
- (18) Chemical constituent of the plant which is medicinally active is known as?
- (19) Give the common structure of Steroids.
- (20) Give the name of micro-organism which is useful to prepare Vinegar.

2 (a) Answer any **Three** : **6**

- (1) Draw a labeled diagram of a control valve.
- (2) Write a note on semi commercial plant.
- (3) Write a short note on industrial plant layout of a chemical industry.
- (4) Give synthesis of Paracetamol.
- (5) Give synthesis of Ephedrine.
- (6) Define :
 - (i) Alkaloid
 - (ii) Hypnotics and Sedatives.

(b) Answer any **Three** : **9**

- (1) Explain ON-OFF control.
- (2) Write advantages and disadvantages of batch reactor.
- (3) Explain in detail explosivity in process safety.
- (4) Give synthesis of Sulphaguanidine.
- (5) Explain in brief : Factors affecting bacterial growth.
- (6) Explain : Structure of bacteria in brief.

- (c) Answer any **Two** : **10**
- (1) Explain in detail components of a control system.
 - (2) Give comparison between standard equipment's and specially designed equipment's.
 - (3) Explain : Proteins in detail.
 - (4) Explain : Lactic acid production in detail.
 - (5) Explain : Terpenoid in detail.
- 3** (a) Answer any **Three** : **6**
- (1) Define :
 - (a) Simple asphyxiates
 - (b) Chemical asphyxiates.
 - (2) Explain :
 - (a) P-Control
 - (b) PI-Control.
 - (3) Write a short note on laboratory safety.
 - (4) Give synthesis of Barbitol.
 - (5) Give synthesis of PAS.
 - (6) Define :
 - (i) Glycoside
 - (ii) Fermentation.
- (b) Answer any **Three** : **9**
- (1) Enlist advantages and disadvantages of an automatic control system.
 - (2) Write a short note on Process Research.
 - (3) Write a note on color codes for safety.
 - (4) Give synthesis of Propranolol.
 - (5) Explain in brief : Conditions affecting Enzyme substrate activity.
 - (6) Explain : Tannins.

(c) Answer any **Two** : **10**

- (1) Give Comparison between open loop control system and closed loop control system.
 - (2) Explain in detail storage, handling and transportation of chemicals in industries.
 - (3) Explain control of diseases due to chemical effects.
 - (4) Explain : Manufacturing of Penicillin V in detail.
 - (5) Explain : Carbohydrates in detail.
-