



MAO-003-001648 Seat No. _____

Third Year B. Sc. (Sem. VI) (CBCS) Examination

March / April - 2018

**IC-603 : Pharmaceuticals-2 & Fundamental of
Chemical Engineering - II**

**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 and assume suitable data.
 - (4) Question-1 each question carries 1 marks objective type question.
 - (5) Question-2 and 3 carries 25 marks each.

1 Answer the following question : 20

- (1) What do you mean by the term Hazards ?
- (2) Define the term fire point.
- (3) Give full form of NIHL.
- (4) Define the term Tele-metering.
- (5) What is meant by the term transfer function ?
- (6) Define the term steady state.

- (7) Define : Elasticity.
- (8) Enlist any four technological properties ?
- (9) What do you mean by wear resistance ?
- (10) Give check list for Filtration equipment's ?
- (11) $C_{15}H_{24}$ is the molecular formula for _____ terpenoid.
- (12) Therapeutic index is the ratio of _____ ?
- (13) According to W.H.O. hypertension is a state where systolic pressure _____ mm of Hg and diastolic pressure _____ mm of Hg.
- (14) Give one example of bicyclic terpenoid.
- (15) Give general structure of steroid.
- (16) Which dye was identified as a Magic Bullet by Paul Ehrlich?
- (17) Give structural formula of isoprene.
- (18) The non-sugar residue in glycoside is known as _____ (Glycone/Aglycone).
- (19) Give one example of anti-hypertensive drug.
- (20) Chemical constituent of the plants which is medicinally active known as ?

2 (a) Answer any Three :

6

- (1) Define : (a) Resistance (b) Conductance.
- (2) Define : (a) Offset (b) Error.
- (3) Define : (a) Lost time injury (b) Frequency rate.
- (4) Classify micro-organisms in brief.
- (5) Explain in brief : Glycoside
- (6) Define : (i) Tannin (ii) Alkaloid

(b) Answer any three : 9

- (1) Write a note on Operating conditions to be considered for safety in a chemical industry.
- (2) Give advantages and disadvantage of automatic control system.
- (3) Write a note on CSTR.
- (4) Give synthesis of : Ibuprofen.
- (5) Give synthesis of : Sulphathiazole.
- (6) Describe in brief : Oil, Fat and Wax.

(c) Answer any two : 10

- (1) Write a detailed note on Laboratory Safety.
- (2) Write a note on sources of information for a process research.
- (3) Explain with neat diagram transportation lag. Explain three reasons for transportation lag.
- (4) Explain the structure of bacteria.
- (5) Explain : Cardiovascular drugs in detail.

3 (a) Answer any three : 6

- (1) Draw a labeled diagram of a control valve.
- (2) Write a note on time schedules in chemical industries.
- (3) Write a note on steps taken to control diseases due to chemical effects.
- (4) Define : (i) Fermentation (ii) Sedative.
- (5) Define : (i) Bactericide (ii) Chemotherapy.
- (6) Give the synthesis of : Aspirin.

(b) Answer any three : 9

- (1) Write a note on utilities used in chemical industries.
- (2) Enlist advantages and disadvantages of a manual control system.
- (3) Write a note on color codes for safety.
- (4) Give synthesis of : Paracetamol.
- (5) Give synthesis of : Sulphaguanidine.
- (6) Give synthesis of : Barbital.

(c) Answer any two : 10

- (1) Explain in detail components of a control system.
 - (2) Explain in detail storage, handling and transportation of chemicals in industries.
 - (3) Discuss : Carbohydrates
 - (4) Give detailed manufacturing of Penicillin V with diagram.
 - (5) Give an account of Protein in detail.
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