



RZ-003-001648

Seat No. _____

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

March - 2019

**IC - 603 : Pharmaceuticals-2 & Fundamentals 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 carries 20 marks.
(6) Question-2 & 3 carry 25 marks each.

1 Answer the following questions : 20

- (1) Carbohydrate are polyhydroxy aldehyde or _____
- (2) Alkaloids are basic _____ organic compound.
- (3) Ninhydrine test is used for detection of protein. True/False?
- (4) Non-sugar residue is also known as _____
- (5) Therapeutic index is ratio of LD₅₀ to _____
- (6) Pathogens are disease producing bacteria. True/False?
- (7) Enzymes are known as _____ catalyst.
- (8) Which enzyme is used for catabolism of lipid?
- (9) The cell wall of bacteria is made up of _____
- (10) Oils and fats are glycerides of higher _____ acids.
- (11) Give full form of UEL.
- (12) A temperature at which material will self-ignite is known as _____ temperature.
- (13) Health hazards are caused due to _____ types of chemicals.

- (14) The maintenance and repairing in standard equipment is _____
- (15) What is Castability of material?
- (16) Process research includes library and _____
- (17) Give full form of CSTR.
- (18) Offset is sustained deviation of the controlled variable from set point. True/False?
- (19) _____ means difference between the maximum and minimum value of physical O/P.
- (20) Which control system is independent on output signal?

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

- (1) Define Phytoconstituents with example.
- (2) Enlist factors affecting activity of enzyme.
- (3) Discuss anti-pyretic effect with example.
- (4) Define : (i) Strength (ii) Formability
- (5) Define : (i) Lost time injury (ii) Frequency rate
- (6) What is dead time?

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

- (1) Define the term 'Microbiology'.
- (2) Write a short note on volatile oils.
- (3) Give synthesis of Phenacetin.
- (4) Discuss any two mechanical properties of metal.
- (5) Explain transportation lag with neat diagram.
- (6) Explain function of measuring element.

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

- (1) Give synthesis of (i) Fenoprofen (ii) Isoniazid
- (2) Explain production of lactic acid via fermentation process.
- (3) Discuss. control valve with neat diagram.
- (4) Describe proportional controller with diagram.
- (5) Explain time schedule used in chemical industries.

- 3 (A) Answer any **Three** : **6**
- (1) Write a short note on Tannins.
 - (2) Write a brief note on Flavanoids.
 - (3) Give synthesis of Mefenamic acid.
 - (4) Give any four differences between standard and specially designed equipment.
 - (5) Define : (a) Output (b) Capacity
 - (6) Write function of Final control element.
- (B) Answer any **Three** : **9**
- (1) Draw only diagram of structure of bacteria.
 - (2) Write a short note on oils, fats and waxes.
 - (3) Give synthesis of Atenolol.
 - (4) Discuss capacitance with diagram.
 - (5) Discuss class of fire and its extinguishing agents in brief.
 - (6) Explain colour codes for safety.
- (C) Answer any **Two** : **10**
- (1) Give the synthesis of (i) Sulphadoxin
(ii) Sulphathiazole
 - (2) Give the synthesis of (i) Secubarbital
(ii) Aprobarbital
 - (3) Discuss various components of control system.
 - (4) Explain dangerous properties of chemicals in detail.
 - (5) Discuss catabolism of protein in detail.
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