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SEAT No. _____

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY
M.Sc. (IV SEMESTER) EXAMINATIONS
20th MARCH, 2019 (WEDNESDAY)

TIME: 2.00 p.m TO 5.00 p.m

PAPER: PS04CBOT22 - BIOCHEMISTRY AND MEDICAL BOTANY

TOTAL MARKS: 70

I. Choose the most appropriate answer: (8 marks)

- i) Which of the following is/are the most common secondary structures found in proteins?
a) Alpha helix b) beta sheet c) random coils d) both a) and b)
- ii) An enzyme without its non protein moiety is known as
a) Apoprotein b) coenzyme c) holoenzyme d) none of these
- iii) Which of the following monosaccharides is commonly found in fruits?
a) Glucose b) Sucrose c) Fructose d) Maltose
- iv) The most suitable drug for the treatment of congestive cardiomyopathy is
a) Digitalis b) Licorice c) Reserpine d) Solanine
- v) It is important to collect the crude drugs at the right time to ensure
a) They are in good condition c) they are not spoiled
b) They contain maximum active principle d) none of these
- vi) The precursors for alkaloid biosynthesis are
a) Phenols b) amino acids c) Lipids d) Proteins
- vii) Enflourage is a method commonly used for the separation of
a) Essential oils b) alkaloids c) steroids d) Glycosides
- viii) The active principles of *Rauwolfia* are mainly used as a
a) Cardiac tonic b) analgesic c) antipyretic d) hypotensive

II. Write briefly on any seven:

(14 marks)

- i) Peptide bond
ii) Polysaccharides
iii) Cofactors and prosthetic groups
iv) Unsaturated fatty acids
v) Nitrogenase complex
vi) Steam distillation
vii) Uses of Ergot alkaloids
viii) Diosgenin and its uses
ix) Cardiac glycosides

(1)

(P.T.O.)

III. Answer in detail

1. A) Give a detailed account of simple and complex carbohydrates (6)
B) What are triglycerides? Write briefly on saturated and unsaturated fatty acids (6)

OR

- B) Describe the secondary structure of proteins. What are the cellular functions of proteins? (6)
2. A) Give a comparative account of lock and key and induced fit model for enzyme – substrate interaction. (6)
B) What are cofactors? Write the types of cofactors. What is their role in enzyme function? (6)

OR

- B) Describe the various systems of classification of crude drugs (6)
3. A) Write in detail on the methods and significance of collection of crude drugs from plants. (6)
B) Describe the biosynthesis of alkaloids from Tryptophan (6)

OR

- B) Give an account of the cultivation, collection and uses of Senna (6)
4. A) Explain the chemical tests for Vinca alkaloids. Briefly write on the active principles and uses of Vinca alkaloids. (6)
B) What are essential oils? Explain the various methods used for the separation of essential oils from plants. (6)

OR

- B) Write notes on
(i) Coca (ii) Opium (6)

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