

Seat No.: _____

[28/A-7]

SARDAR PATEL UNIVERSITY
M.Sc. Chemistry (Fourth Semester) Examination
Saturday, 29th October 2016
Medicinal Chemistry (PS04ECHE01)

Time: 2:00 pm to 5:00 pm

Total marks: 70

Note: (i) Figure to the right indicates Marks
(ii) Attempt all Questions

Que: 1 Choose the correct answer from the following multiple choice of questions [08]

- i. At which site, a drug binding to the tissue of protein occurs more extensively?
(a) Extracellular (b) Intracellular (c) Intercellular (d) None of these
- ii. Average plasma concentration is calculated by which of the following?
(a) only total body storage
(b) only volume of distribution
(c) both total body storage and volume of distribution
(d) none of these
- iii. Which of the following receptor gives response to a stimulus in internal or external environment of an organ?
(a) Channel linked (b) enzyme linked
(c) Intracellular (d) sensory
- iv. First order kinetics is....
(a) Rate of reaction is proportional to concentration
(b) More common than zero order kinetics
(c) Apply to exponential process
(d) Apply to high plasma concentrations (>20 mg/100ml) of ethanol
- v. Propranolol is which class of antianxiety drugs?
(a) β - blocker
(b) Benzodiazepines
(c) Azapirones
(d) Sedative anti-histaminic
- vi. Depression is characterized by.....
(a) Feelings of intense sadness or worry, agitation, self-depression and various physical changes
(b) Happiness with physical changes
(c) Physical changes with sharp enjoyable moments
(d) None of the above

- vii. Which antibiotic was accidentally discovered by Alexander Fleming?
(a) Tetracycline (b) Penicillin (c) Cephalosporin (d) Ciprofloxacin
- viii. Which of the following antibiotic effectively acts on disruption of cell membrane function?
(a) Polymaxine (b) Quinolone (c) Rifamycine (d) Sulfonilamide

Que: 2 Answer the following (Any seven)

[14]

- i. State at least four neurotransmitters.
- ii. State the type of receptors.
- iii. Give details of pharmacodynamic.
- iv. Give details of receptor type.
- v. What is angina and give most frequent cause of angina?
- vi. Give the importance of Monoamine Oxidase inhibitors.
- vii. Give the details of Broth dilution test
- viii. Give the difference between anaerobic and aerobic bacteria.
- ix. Explain the properties of Natural and semi-synthetic antibiotics.

Que: 3 (a) Discuss the pharmacokinetics in terms of time course of drug action and first & zero order kinetics? [6]

(b) Write note on: [6]

- (i) Drug elimination.
- (ii) Brief various pharmacokinetic parameters.

OR

(b) Explain various methods of drug administration in human body. [6]

Que: 4 (a) What are chemical messengers? Explain the signaling through hormones. [6]

(b) Answer the followings [6]

- (i) Antagonist and agonist
- (ii) Define the term binding site and write their characteristics properties.

OR

(b) How prodrug development in most cases is to solve specific pharmaceuticals? Discuss with suitable examples. [6]

Que: 5 (a) Give the classification of antianxiety drugs. Give synthesis of any one drug and explain their adverse effect? [6]

(b) Answer the followings: [6]

(i) Give the synthesis of Oxazepam.

(ii) Give the SAR of Dihydropyridines.

OR

(b) Discuss the Selective serotonin reuptake inhibitors with their mode of action. Also give any one synthesis of this class of drug. [6]

Que: 6 (a) Draw the cell structure of bacteria. Explain the roll of polymaxin and tetracycline as antibiotics? [6]

(b) Give the synthesis of following drugs: [6]

(i) Amoxicillin

(ii) Ofloxacin

(iii) Nalidixic acid

OR

(b) What are antineoplastics Agents? Give their classification and discuss any one drug profile. [6]

***** Best of Luck *****

