

(82 & A-24)

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SARDAR PATEL UNIVERSITY
M. Sc. Organic Chemistry [Sem.-IV]
External Theory Examination April - 2016
Subject: Medicinal Chemistry (PSO4ECHE01)

Date: - 13/04/2016, Wednesday
Time: - 3 hours - 2.30 - 5.30 P.m.

Marks: 70

Que. 1. Choose the correct answer from the following multiple choice of questions [8]

- (i) Which of the following acts on intracellular receptor?
(a) Serotonin (b) Glucagon (c) Corticosteroids (d) Insulin
- (ii) Volume of distribution is equals to.....
(a) Doses given/ plasma concentration
(b) Total amount of drug in the body/Plasma concentration
(c) Urine drug concentration/plasma concentration
(d) Doses given/union concentration
- (iii) Which of the following is not a protein target for drug binding?
(a) Side of action (b) Enzyme (c) Carrier molecules (d) Ion channels
- (iv) Drug fit receptors using the lock and key model by covalent bonds are the.....and thespecific.
(a) Weakest; most (b) Strongest; least (c) Strongest; most (d) Weakest; least
- (v) Sedatives are central nervous system (CNS) depressant drugs that.....
(a) Decrease the hypertension.
(b) Increase the excitement, tension, and product relaxation.
(c) Increase the hypertension
(d) Decrease the excitement, tension, and product relaxation.
- (vi) Which of the following is used as potent a local anaesthetic as procaine.
(a) Diazepam (b) Benzodiazepines (c) Azapirones (d) Chlorpromazine
- (vii) Which of the following is used to destruction of DNA?
(a) Asparaginase (b) Tubuline binders
(c) Topoisomerase inhibitors and alkylating agents (d) None of the above
- (viii) Which of the following is used to treat with protein tubulin?
(a) Tubulin binders (b) Alkylating agents
(c) Topoisomerase inhibitors (d) None of the above

Q. 2. Answer the following. [Any seven]

[14]

- (1) Define the term Pharmacokinetics and Pharmacodynamics.
- (2) Define "Prodrug" and Agonist type of drugs.
- (3) State the characteristic of binding site.
- (4) What is Metabolism?
- (5) What is Anxiety and explain their causes?
- (6) Write at least four neurotransmitters.
- (7) Give the mode of action of β - lactum
- (8) Give the difference between natural and synthetic antibiotics.
- (9) What is angina pectoris?

①

(P.T.O.)

- Q. 3. (a) Describe briefly on drug absorption and metabolism. [6]
(b) Discuss the Pharmacokinetics in terms of time course of drug action. [6]

OR

- (b) Answer the followings: [6]
(i) Explain the Lead compound and its modification of morphine in drug discovery.
(ii) Morphine has an AVD of 230 L/70 Kg and half life elimination is three hours in 70 Kg membrane, what will be the appropriate rate of clearance?

- Q. 4. (a) Explain the various receptor types and provide the detail with suitable example. [6]
(b) What are chemical messengers? Explain the signaling through hormones. [6]

OR

- (b) Explain the followings: [6]
(i) Enzymatic biotransformation of drugs
(ii) Discuss in brief about lock and key model and induced fit model.

- Q. 5. (a) What is hypertension? Give classification of antihypertensive drugs with suitable examples. [6]
(b) Explain the following [6]
(i) Give the synthesis of Nifedipine
(ii) Give the synthesis of Diazepam

OR

- (b) Explain the calcium channel blockers? Discuss the structural activity of relationship of Dihydropyridines [6]

- Q. 6. (a) Give the classification of Alkylating agents? Explain briefly their metabolism process. [6]
(b) Draw the cell structure of bacteria. Explain the roll of antibiotics against it? [6]

OR

- (b) Give the synthesis of followings: [6]
(i) Ampicillin (ii) Norfloxacin (iii) chlorambucil

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(2)