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[A-33]

SARDAR PATEL UNIVERSITY

M.Sc. (Integrated) Biotechnology (IGMBT), 10th Semester Examination
Friday, 13th April 2018
10:00 A.M to 1:00 P.M
PS10CIGMB3: Drug design and development

Total Marks: 70

Note: (1) Figures to the right indicate marks.
(2) Draw a neat and labeled diagram, wherever necessary.

Q. 1 Choose the most appropriate answer from the four alternatives given: [8]

(1) Curacin A is isolated from which of the following source?
(a) Brazilian viper (b) puffer fish (c) Ecuadorian poison frog (d) none of the above

(2) Artemisinin drug used to cure:
(a)arthritis (b)Rheumatic Fever (c) Malaria (d) inflammation

(3) Which of the following amino acids present in active site of Enzymes?
(a) Serine (b) Histidine (c) Cysteine (d) All of the above.

(4) Serotonin receptor agonists are used in treatment of which of the following diseases?
(a) Migraine (b) Parkinson's Disease (c) Cholera (d) None of the above

(5) Palmitate ester of chloramphenicol is used to :
(a) increase polarity (b) decrease polarity (c) target drug (d)none of them

(6) Carbidopa is a example of :
(a) prodrug (b)Sentry drug (c) none of them (d) all of them

(7) Which of the following drug withdrawn from the market during phase IV clinical trial? : (a) Atenalol (b) Practolol (c) stematolol (d) A and B both

(8) During Phase IV clinical trial Rofecoxib was associated with :
(a) Increase Risk of heart pain (b) increase in B.P (c) increase rate of heart attack (d) all of them

[14]

Q-2 Answer any SEVEN from the following:

(1) Pitfalls

(2) What are Orphan receptors?

(3) High-throughput screening

(4) How antifreeze poisoning occurs?

(5) Define Transition state analogues.

(6) Differentiate: Sentry drugs and Prodrugs

(7) Enlist the various methods used for drug targeting.

(8) Define steric shields?

(9) What is EPO and PCT?

PTO

Q.3 (a) How do bioassay helps in identifying the lead molecule. Write detail note on Screening by NMR. [6]

(b) Define lead molecule. How can you obtain it from natural or synthetic scaffold. [6]

OR

(b) What is an ideal drug target? Describe six properties of an ideal drug target. [6]

Q.4 (a) Explain drug action at carrier protein with suitable examples. [6]

(b) Discuss the various parameters used to design agonist. [6]

OR

(b) Discuss mechanism of action of 6 marcaptopurine and Aspirin in detail [6]

Q.5 (a) How drugs can be made less resistant to drug metabolism? [6]

(b) How drugs can be made to increase solubility and membrane permeability. [6]

OR

(b) What are Prodrugs? Write in brief purposes for which prodrugs are designed. [6]

Q.6 (a) Write detail account drug metabolism study for development of new drug. [6]

(b) Give detail account on phase III and IV clinical trial. [6]

OR

(b) Explain chemical development process for development of new drug in brief. [6]

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