[A-40]

No. of Printed Pages: 2

{ } SARDAR PATEL UNIVERSITY
M.Sc. (Integrated) Biotechnology (IGMBT), 10th Semester Examination
Saturday, 2nd April 2016
10:30 A.M to 1:30 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) Pharmacophore is common description of ---------- of few inhibitors,
(a) structure (b) property (c) angle (d) structure property and angle

(2) Toxicity of molecules can be predicted using:
(a) QSAR (b) QSTR (c) QSPR (d) QSER

(3) 6 mercaptopurine is an example of :
(a) Irreversible inhibitor (b) Reversible inhibitor (c) Allosteric inhibitor
(d) none of the above

(4) Which of the following drug use to treat rheumatoid arthritis :
(a) teriparatide (b) cislosporin (c) etanercept (d) all of the above

(5) Which of the following drug use as antidepressant drug:
(a)Fluoxemine (b) clorgiline (c) selegilline (d) all of the above

(6) A second drug is administered along with the principal drug, this approach is known as – (a) Sentry drugs (b) b) Orphan drugs (c) prodrugs (d) none of the above

(7) Which of the following is not a drug regulatory body?
(a) FDA (b) NDA (c) PCT (d) IND

(8) Phase III clinical trial take
(a) 3 years (b) 7 years (c) 1 years (d) 4 years

Q-2 Answer any <u>SEVEN</u> from the following: **[14]**

(1) Define pharmacopore
(2) Write Lipinsky's Rule of five
(3) Explain Trojan house approach for levodopa in brief
(4) Define umbrella effect.
(5) Discuss in brief about mechanism of action of drug used in antifreeze poisoning.
(6) Enlist the various methods used for drug targeting.
(7) Define steric shields?
(8) Differentiate between LD_{50} and ED_{50}
(9) Enlist regulatory requirements for clinical trials.

PTO

Q.3 (a) How do bioassay helps in identifying the lead molecule. [6]

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

OR

(b) What is QSAR? Describe the advantages of QSAR over traditional method. [6]

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

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

OR

(b) Write brief account on protein as a drug. [6]

Q.5 (a) What are Prodrugs? Write in brief purposes for which prodrugs are designed [6]

(b) Write a detail account on Drug alliances [6]

OR

(b) How drugs can be made less resistant to drug metabolism? [6]

Q.6 (a) Write note on IND and NDE filling of drug molecule in brief. [6]

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

OR

(b) Describe various components of CTD with diagram. [6]

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