

1- In drug development and evaluation: Which statement is false ?

:select one

- a. Most lead compounds are of natural origin at present
- .b. Chronic toxicity tests may accompany Clinical trials
- c. Drug mutagenicity is correlated to teratogenic potential of drugs
- d. LD50 is always estimated during acute toxicity tests in animals
- e. Phase 4 studies for rare Side effects can last up to 8 years after drug marketing

2- Regarding rules of pediatric prescription, all the following are true EXCEPT ?

:select one

- a. Dose of drug depends on Child weight
- b. Avoid prolonged treatment With steroids
- c. Monitor and review CNS affecting drugs
- d. All medicines should be taken away from children
- e. Antibiotics are used frequently

3- Genetic polymorphism can occur in all following EXCEPT ?

:Select one

- a. Beta 2-adrenergic receptor
- b. Angiotensin converting enzyme inhibitors
- c. Vitamin K epoxide reductase

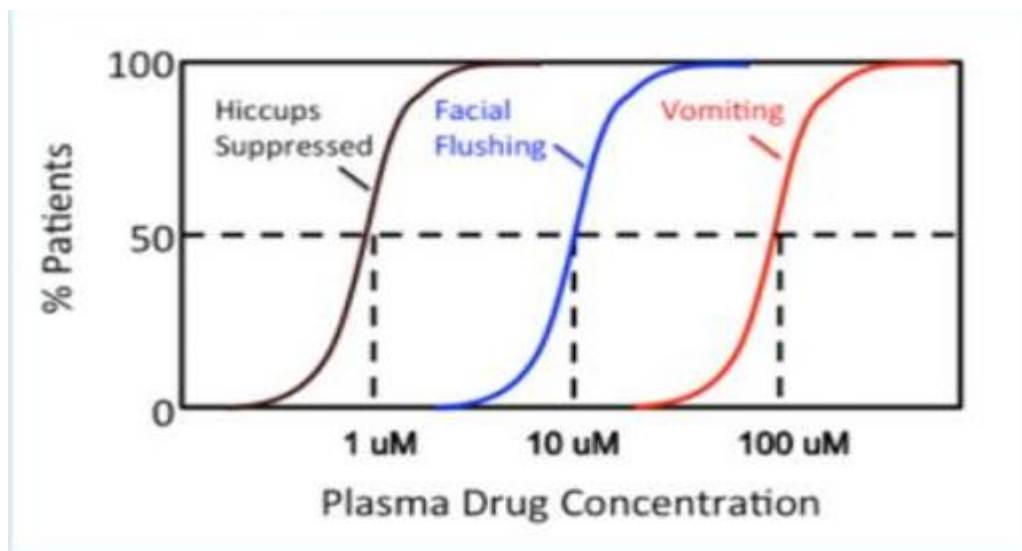
- d. Serotonin transporter
- e. Calcium transporter

4- The following stimulate liver microsomal metabolism of drugs except ?

:Select one

- .a. Alcoholism
- .b. Cabbage
- c. Grapefruit
- d .Barbecued meat
- e. smoking

5- you are assessing the effects of new drug for the treatment Of intractable hiccups. over a Wide concentration range, three dose response curves were defined in test subjects. Using vomiting as an unwanted side effect, what would the estimated therapeutic index for this drug ?



select one :

a. 0.01

b. 1

c. 10

d. 100

e. 0.1

6-You are a researcher at a pharmaceutical industry looking to screen ten thousand drug analogues to find the most efficacious cholinergic agonist, What biomarker that you Should screen for is?

:Select one

a. Bioavailability

b. EC50

c. Emax

d. Half life

e. Maximal effect

7- The following decrease glomerular filtration of drug except?

:select one

.a. Hypovolemia

.b. Hypoalbuminemia

c. Drug molecules bound largely to plasma albumin

d. Chronic parenchymatous renal disease

e. Large MW of drug

8-The following are true about total drug clearance (CL) from body except

:select one

- a. It represents the volume of plasma from which drug is eliminated per unit time
- b. It remains constant in first-order kinetics
- c. It is equal to dose of drug, given IV, divided by its plasma AUC
- .d. It is inversely related to drug plasma half-life
- e. It is useful to determine loading dose of drug in repeated drug administration

9- Which of the following acts on intracellular receptors?

select one :

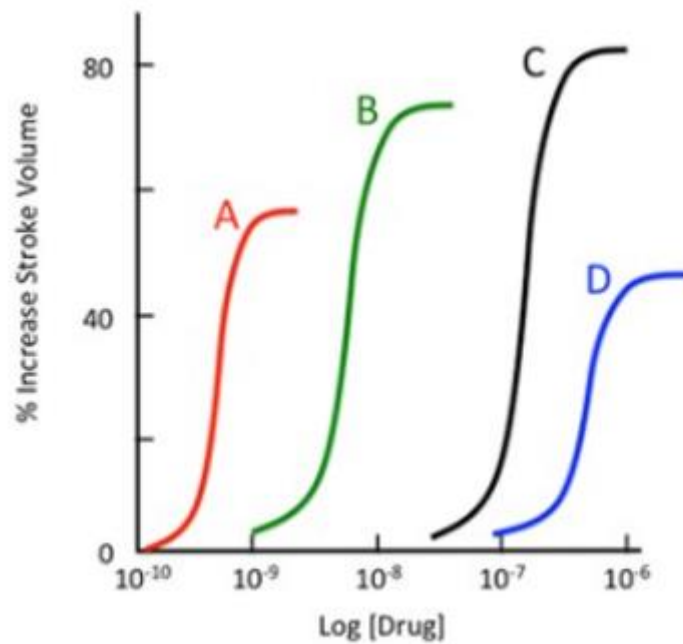
- a. Serotonin
- b. Glucagon
- c. Corticosteroids
- d. GABA
- e. Insulin

10- The following factors will decrease rate of drug absorption from GIT except?

Select one :

- a. Enhanced intestinal motility by osmotic laxative
- b. Biliary obstruction and chronic pancreatitis
- c. Delayed gastric emptying
- d. Formation of food-drug complexes
- e. small particle size Of drug

11- Dose response data was collected during the preclinical testing of four drugs for the treatment of acute heart failure. Which drug studied was the most efficacious ?



- a. A+B
- b. B
- c. C
- d. D
- e. A+D

12- warfarin is a drug that has been used to treat blood coagulation. It has a therapeutic index value of 2. HOW many daily doses of Warfarin will the average patient have to take at one time to have a 50% chance of developing toxic side effects?

:Select one

- a. One time
- b. Two times
- c. Three times
- d. Half dose
- e. Four times

13- A toxic dose is?

:Select one

- a. The amount of a substance to produce effects hazardous for an organism
- b. The amount of a substance to accelerate an increase of concentration of medicine in an organism
- c. The amount of a substance to produce the required effect in most patients
- d. The amount of a substance to produce the minimal biological effect
- e. None of the selection

14- Regarding abnormalities of fetus, virilization may occur with the following drug?

Select one :

- a. Androgens
- b. Aspirin
- c. Tetracyclines
- d. Indomethacin
- e. Thalidomide

15-All following about polymorphisms in drug metabolising enzymes are true EXCEPT?

:Select one

- a. Poor metabolisers develop adverse effects when treated with standard dose
- b. Ultrarapid metabolisers require high doses of drugs
- c. High incidence of ultrarapid metabolisers among non-responders
- d. Intermediate metabolisers required normal dose of drug
- e. Extensive metabolisers required normal dose of drug

16- Regarding poisoning, naloxone is the antidote of the following drug?

:Select one

- .a. Opioids

- b. Iron
- .c. Digoxin
- .d. paracetamol
- .e. Benzodiazepines

17- The following prolong Plasm half-life of a drug except?

:select one

- a. Binding to intracellular ligands
- b. Renal failure
- c. Binding to plasma albumin
- d. Acute or chronic liver disease
- e. Ion-trapping of drug in urine

18- All following combinations about drugs and metabolising enzymes are true EXCEPT ?

Select one :

- a. Warfarin- CYP2C9
- b. omeprazole- CYP2D6
- c. NSAIDs- CYP2C9
- d. Warfarin- Vitamin K epoxide reductase
- e. Antidepressants- CYP2D6

19- Choose the correct statement about partial agonists?

Select one:

- a. Partial agonists are molecules that can always cause a maximal response irrespective of the presence of antagonists
- b. partial agonists are molecules that have affinity toward the



target receptor but no efficacy

c. Partial agonists are molecules that have affinity and efficacy toward the target receptor

d. partial agonists are molecules that have an agonistic effect on the receptor, but only ever achieve a submaximal response

e. None of the selection

20- In Children, chronic use Of corticosteroids Will lead to the following?

select one :

.a. Dystonias

.b. Discoloration of teeth

.c. Inhibition of growth

.d. Hepatotoxicity

.e. Damage of growing cartilage

21- Concerning poisoning , hyperthermia is one of symptoms of the following drug?

Select one :

a. Paracetamol

b. Aspirin

O c. Atropine

d. Opioids

e. Iron

22- Pharmaceutical Bioequivalence between 2 dose forms of a drug: One statement is false?

Select one :

- a. the 2 forms have similar oral F
- .b. the 2 forms have similar rate of absorption
- .c. The 2 forms are therapeutically inequivalent
- d. one dose form may have been synthesized by different pharmaceutical company
- e. one dose form may have been synthesized by same company using different method

23- The following are oxidation reactions carried out by liver ?except

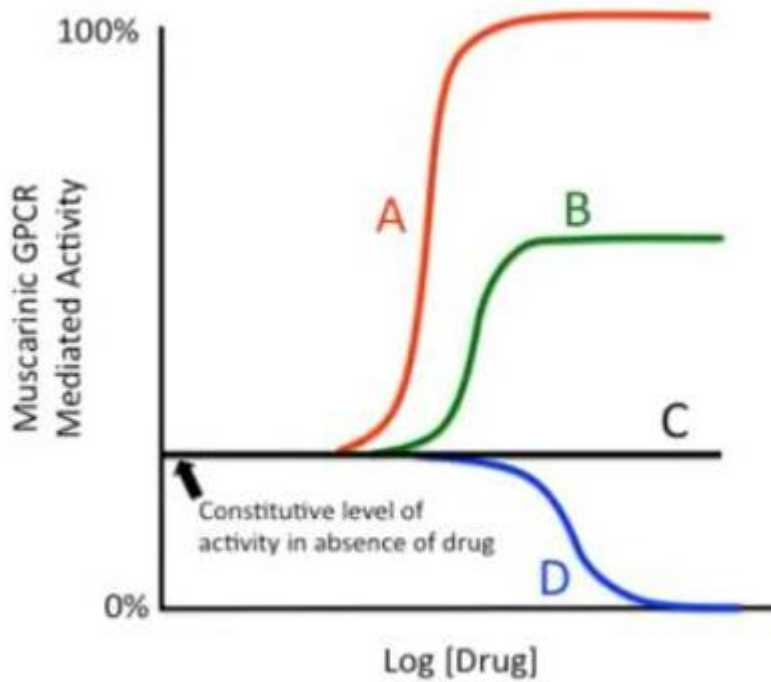
:select one

- a. Epoxidation
- b. Dealkylation
- c. Deamination
- d. Methylation
- e. Hydroxylation

24- G-protejn coupled receptors have constitutive (basal) activity independent of ligand activation. specific drugs (partial agonists) can

bind to these receptors, producing effects that are less to those of full agonist. In the graph below, which drug displays a dose-response

relationship consistent with this type of behaviour :



- a.A
- b.B
- c.C
- d.D

25- Regarding drugs with large FPHE one of the following is false?

select one :

- a. decreases oral F for drugs
- b. their parenteral dose is small
- c. oral F is decreased in liver disease
- d. have high ER
- e. Their oral F is further decreased in chronic smokers

26- In phase 3 Clinical Trial on new antihypertensive drug:  
Which of following is false?

Select one :

- a. Placebo and positive control are used for optimal Clinical trial results
- b. Design of trial and sample size determination are guided by statistician
- c. Requires prior submission of IND application to licensing health authority
- d. The results of animal acute & subacute toxicity tests must available beforehand
- e. The details of trial must not be explained to patients

27- The following are slow-release dose forms for systemic drug administration except?

Select one :

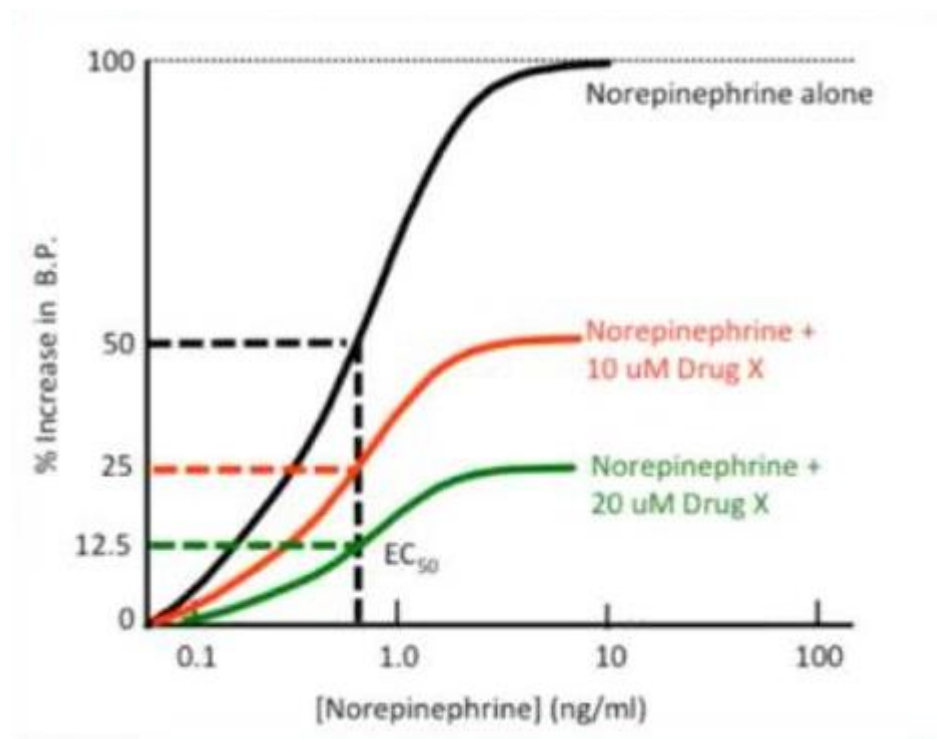
- a. slow-release tablets
- b. drug in Oil
- c. delayed-release tablets
- d. Sublingual tablets
- e. Enteric-coated tablets

28- concerning teratogenicity, thalidomide can produce the following fetal abnormality?

Select one :

- a. Early closure of ductus arteriosus
- b. Phocomelia
- c. Discoloration of teeth
- d. Virilization
- e- Neural tube defects

29- What is the type of antagonism when different fixed concentrations of drug X acts on the effect of the norepinephrine on arterial blood pressure ?

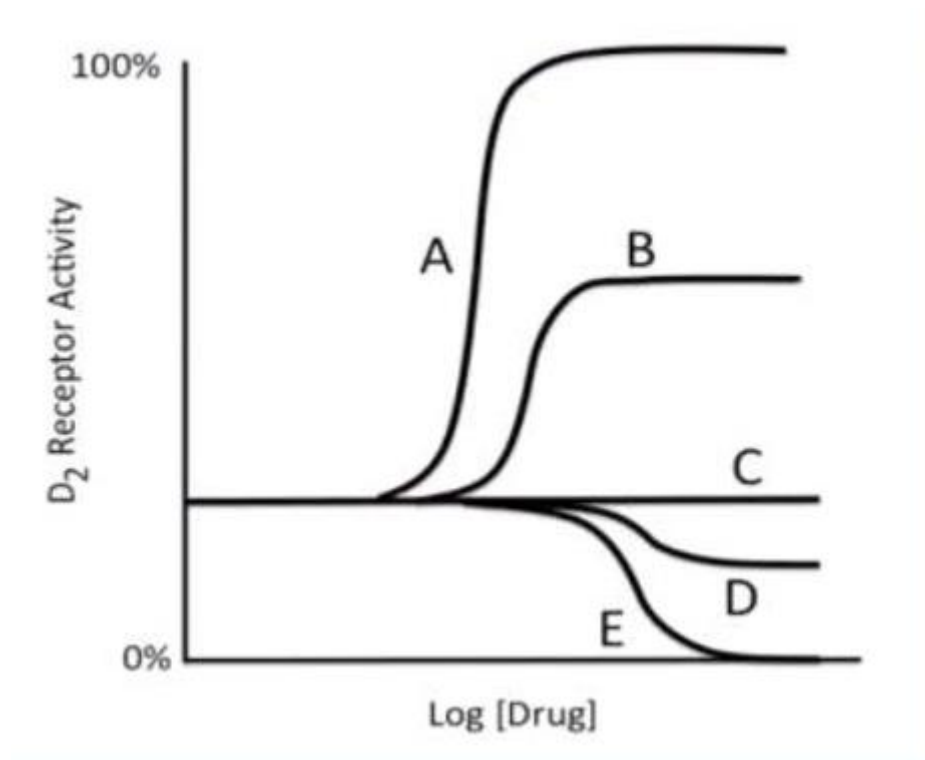


- a. Chemical antagonist
- b. Competitive antagonist
- c. Physiological antagonist
- d. antagonist
- e. Silent antagonist

30- Drugs with low efficacy bind to receptors but do not fully activate them. Such "inverse agonists" can act as either as a weak agonist (in the absence of a full inverse agonist), or as a antagonist (if a full inverse agonist is present). Which

curve best reflects

the effect produced by this type of agonist when it is administered alone ?



a.A

b.B

c.C

d.D

e.E

31-All following about ADRS are true EXCEPT

Select one :

a. About 50% of ADRs are preventable

b. Most of adverse effects are mild in severity

c. Reporting of ADRs is common

- d. There is a national pharmacovigilance center in Jordan
- e. Under-reporting is common phenomenon

32- Which one of following is true about drugs With high plasma albumin binding?

select one :

- a. The bound form is excreted in urine
- .b. Binding is specific for each drug
- c. Binding increases the volume of distribution Of drug
- .d. Binding of drug to plasma albumin is saturable
- .e. The bound form is equally active to free form

33- All following about adverse drug reactions (ADRS) are true EXCEPT?

Select one :

- a. Type A reactions are due to increased pharmacology Of drugs
- b. carbamazepine-induced Skin rash is type B reaction
- c. Type A are predictable
- d. Type B are predictable
- e. Type B are unpredictable

34- Which statement is FALSE regarding adverse drug reactions (ADRs)?

:Select one

- a. Elderly are more susceptible to ADRs
- b. polypharmacy predisposes to ADRS
- c. Narrow therapeutic index drugs are more likely to cause ADRs

- d. Drug-drug interactions are risk factors to ADRS
- e. History of lung diseases is a risk factor to ADRs

35- Vd of drugs: The following are true except  
:Select one

- .a. is the volume of bod fluids that contain the drug
- b. is measured by mathematical calculations related to single compartment model
- .c. is unequal for different drugs
- d. Mathematical calculations of Vd based on two-compartment model are more accurate
- .e. is low for drug largely bound to plasma albumin

36- Regarding poisoning, benzodiazepines antidote is the following?

Select one :

- a. Naloxone
- b. Acetylcysteine
- c. Flumazenil
- d. Desteroxamjne
- e. Digoxin antibodies

37- It two drugs with the same effect, taken together, produce an effect that is not equal in magnitude to the sum of the effects of the drugs given individually, it is called as ?

Select one :

- a. potentiation



- b. Idiosyncrasy
- c. Antagonism
- d. Synergism
- e. None Of the selections

38- All the following are rules of elderly prescription EXCEPT?

:Select one

- a. Taking drug history
- .b. Think about dose of drugs
- .c. New symptoms may be Side effects
- .d. Think about drug formulation
- .e. Adding new drugs frequently

39- Characteristic of unwanted reaction Which isn't related to a dose or to a pharmacodynamic property of a drug is called?

Select one :

- a. Tolerance
- b. Teratogenic action
- c. Hypersensitivity
- d. Idiosyncrasy
- e. Toxicity

40- All following about pharmacogenetics are true EXCEPT?

Select one :

- a. About 5 % of population exhibit high TPMT activity
- b. TPMT catalyzes methylation of 6-mercaptopurine and azathioprine
- c. Clinical testing for TPMT genetic polymorphisms is available
- d. NAT-2 is involved in metabolism of sulphamethoxazole

e. patients With CYP2C9\*2 are at increased risk of warfarin-induced bleeding

41- In first-order elimination kinetics for drugs: Which one of the following is false?

Select one :

- a. The more is the plasma level of a drug, the more is amount eliminated per unit time
- b. The plasma elimination CT curve linear if logs are used for concentration scale
- c. Plasma half-life is constant
- d. Drug elimination capacity is large
- e. The more is drug plasma level, the less is its fraction eliminated per unit time

42- Which of the following drugs is not commonly involved in causing ADRs?

select one :

- a. Diuretics
- b. Antihypertensives
- c. Paracetamol
- d. Biosimilars
- e. Analgesics

43-Regarding items of prescription, all the following are true EXCEPT?

Select one :

- .a. Identification
- .b. superscription
- .c. Inscription
- .d. subscription

.e. Signature of patient

44- Animal toxicity testing for new drug: Which one of the following is true?

select one :

- a. The "no effect" dose determined in subacute toxicity tests
- b. Chronic toxicity animal tests is required for most new drugs
- c. Toxicity in one species of animals is a reliable predictor of human toxicity
- d. Therapeutic index is correlated with carcinogenic potential of drugs
- e. In subacute toxicity tests, toxic drug doses can be given daily .for 1-2 month

45- Which of the following is false?

:select one

- a. Small molecules like radioactive iodine, & antithyroid thiourea drugs reach high level in milk
- b. In repeated dosing, changes in dosing must done at SS
- .c. Plasma half-life of drugs is directly related to CL total
- d. In urgency, Loading dose of a drug can be estimated from product of its Vd & target Cp
- e. If DI in repeated dosing is twice the half-life, drugin plasma will not reach toxic level

46- The second messenger of G-protejn-coupled (metabotropic) receptor is?

Select one :

- a. Adenylyl cyclase

- b. Phospholipase C
- c. Sodium ions
- d. CAMP
- e. Calcium ions

47- Drug X is a weak organic acid , its PKa is 4.4. If plasma level Of HA is 1 umole, then total plasma (PH 7.4) concentration would be (in umole)?

Select one :

- a. 101
- b. 110
- c. 1001
- d. 1010
- e. 1100

48- If oral F Of drug is 0.4. and its ER by liver is 0.2, the f by intestine is?

Select one :

- a. 0.2
- b 0.5
- c. 0.7
- d. 0.8
- e. 0.9

49- The following are causes ot poor compliance EXCEPT?

Select one :

- a. Lack of patient teaching by his doctor
- b. Failure of patient to obtain the drug

- c. patient forget to take the drug
- d. Discontinuation of taking drugs
- e. Good comprehension by the patient of doctor instructions

50- What does the term "potentiation" mean

Select one :

- a. Intensive increase of drug effects due to their combination
- b. Fast tolerance developing
- c. Cumulative ability of a drug
- d. Hypersensitivity to a drug
- e. None Of the selection

51- Which one of the following is a synthetic biochemical reaction to metabolize drugs in liver?

Select one :

- .a. Deamination
- .b. Hydroxylation
- .c. Acetylation
- .d. Ester hydrolysis
- .e. Dealkylation

52- Regarding abbreviations of prescription, the following sentence is the meaning of STAT?

:Select one

- a. Before meals
- b. After meals
- c. At once
- d. If needed

e. Once daily

53- The following drug can be used in Children over 10 years?

Select one :

- a. corticosteroids
- b. Multivitamins
- c. Tetracyclines
- d. Antihistamine
- e. Inhaled salbutamol

54- The decrease of second messengers' (cAMP, cGMP, Ca<sup>2+</sup> etc.) concentration leads to?

Select one :

- a. Antagonism with endogenous ligands
- b. Protein kinases activation and protein phosphorylation
- c. Inhibition of intracellular protein kinases and protein phosphorylation
- d. Blocking of interaction between a receptor and an effector
- e. None of the selection

55- Dose forms: Which one Of the following is true?

select one :

- a. Slow release drug tablets can have high fractional systemic bioavailability
- b. Drug suspensions can be given IV for quick effect
- c. Drug in oil. given IM, is more quickly absorbed than drug suspension
- d. Enteric-coated tablets of drugs can not hide unacceptable taste but shorten their shelf-life

e. Systemic absorption of drugs from rectal suppositories is consistent

56- An irreversible antagonist is a substance that?

Select one :

- a. Interacts With receptors and produces submaximal effect
- b. Binds to the same receptor Site and shortly inhibits the agonist response
- c. Binds to one receptor subtype as an agonist and to another as an antagonist
- d. Binds to the nonspecific Sites of tissue
- e. None of the selection

57-One of the following is false about zero-order kinetics in drug elimination?

Select one :

- a. The amount Of drug eliminated per unit time is constant
- b. The plasma CT curve is linear without using logs
- c. It applies only to few drugs
- d. The elimination by liver has high enzymatic capacity
- e. Increase in dosing would raise plasma drug concentration to toxic level

58- The following are present in tablets except

select one :

- a. Filler
- b. Active drug principle
- c. Lubricant
- d. preservative

e. Coloured pigment or dye

59- The following are true of facilitated diffusion for drug molecules except?

Select one :

- .a. can occur against concentration gradient
- b- is saturable
- .c. can transport some large or water soluble molecules
- .d. needs special structural configuration
- .e. does not require energy for its completion

60- Simple diffusion of drugs differ from facilitated diffusion by the following except?

select one :

- a. Both are directly related to octanol/water partition coefficient
- .b. Both can transport water soluble molecules
- .c. Both do not need energy provided by cell
- .d. both have a large capacity
- e. Both can not transport sugars like glucose and fructose