1.In the presence of propranolol, a higher concentration of epinephrine is required to elicit full antiasthmatic activity. Propranolol has no effect on asthma symptoms. Which is correct regarding these medications

A.Epinephrine is less efficacious than is propranolol
B.Epinephrine is a full agonist ,and propranolol is a partial agonist
C.Epinephrine is an agonist,and propranolol is a competitive antagonist
D.Epinephrine is an agonist,and propranolol is a noncompetitive antagonist

2. A 47-year-old woman who has been diagnosed with bipolar disorder needs a refill on her lithium prescription. She also has hypertension that is well controlled with an ACE inhibitor. Lithium has a narrow therapeutic index. Which of the following describes a narrow therapeutic index?

A. The chance of toxicity is remote at the therapeutic dose
B. The ratio of TD50 to ED50 equals 1
C. The ratio of TD50 to ED50 is less than 1
D. The therapeutic dose approaches the toxic dose Unive dose is f
E. The therapeutic dose is much greater than the toxic dose

3. Which of the following compounds produces its action by binding to intracellular receptors that bind to nuclear DNA to regulate gene expression:

A. Steroid hormones
B. Insulin
C. Adrenaline
D. GABA(gamma-amino-butyricacid)
E. Aspirin

4. Some drugs have marked tendency to be stored in the body because they are rapidly absorbed and slowly eliminated. These drugs are known as:

A. synergistic drugs
B. cumulative drugs
C. potentiating drugs
D. prodrugs
E. microsomal enzyme inhibitors

5. If 10 mg of oxycodone produces a greater analgesic response than does aspirin at any dose, which is correct?

A. Oxycodone is more efficacious than is aspirin.
B. Oxycodone is less potent than is aspirin
C. Aspirin is a full agonist,and oxycodone is a partial agonist.
D. Oxycodone and aspirin act on the same drug target

6.Which of the following best describes how a drug that acts as an agonist at the A subtype of GABA receptors affects signal transduction in a neuron?

.A. Activation of this receptor subtype alters transcription of DNA in the nucleus of the neuron
B. Activation of this receptor subtype opens ion channels that allow sodium to enter cells and increases .the chance of generating an action potential
C. Activation of this receptor subtype opens ion channels that allow chloride to enter cells and decreases .the chance of generating an action potential
D. Activation of this receptor subtype results in G protein activation and increased intracellular second messenger levels

7. An exaggerated normal pharmacological response to the usual dose of the drug is termed :

A. Tolerance
B. Intolerance
C. Tachyphylaxis
D. Idiosyncrasy
E. Hypersensitivity

8. If 1 mg of lorazepam produces the same anxiolytic response as 10 mg of diazepam, which is correct?

A. Lorazepam is more potent than is diazepam
B . Lorazepam is more efficacious than is diazepam
C. Lorazepam is a full agonist, and diazepam is a partial agonist
D. Lorazepam is a better drug to take for anxiety than is diazepam

9. Methylphenidate helps patients with attention deficit hyperactivity disorder (ADHD) maintain attention and perform better at school or work, with an ED50 of 10 mg. However, methylphenidate can also cause significant nausea at higher doses (TD50 "' 30 mg). Which is correct regarding methylphenidate?

A. The therapeutic index of methylphenidate is 3.
B. The therapeutic index of methylphenidate is 0.3
C. Methylphenidate is more potent at causing nausea than treating ADHD.
D. Methylphenidate is more efficacious at causing nausea than treating ADHD

10. A medical student is doing a summer research project studying five antibiotics to determine potency using the ED50. Antibiotics are placed in plated culture wells with 100,000 CFU of Escherichia coli. The ED50 results for the five antibiotics are shown in the following choices. Based on the results, the most potent antibiotic is:

A. Antibiotic A ED50 = 100
B. Antibiotic B ED50 = 2
C. Antibiotic C ED50 = 80
D. Antibiotic D ED50 = 20
E. Antibiotic E ED50 = 50

11. Which of the following up-regulates postsynaptic alpha1-adrenergic receptors?

A. Daily use of norepinephrine that activates the receptors
B. A disease that causes an increase in the activity of norepinephrine neurons
C. Daily use of phenylephrine , an a1 receptor agonist .
D. Daily use of prazosin, an a1 receptor antagonist

12. In the presence of picrotoxin, diazepam is less efficacious at causing sedation, regardless of the dose. Picrotoxin has no sedative effect, even at the highest dose. Which of the following is correct regarding these agents?

A. Picrotoxin is a competitive antagonist.
B. Picrotoxin is a noncompetitive antagonist
C. Diazepam is less efficacious than is picrotoxin.
D. Diazepam is less potent than is picrotoxin.

ANSWERS			
1	C	7	B
2	D	8	A
3	A	9	A
4	B	10	B
5	A	11	D
6	C	12	B