

Student Name : .....

**Section I: Multiple choice questions, circle the correct answer**  
Octreotide is a long acting synthetic analogue of:

(60 pts.)

- a) Prolactin.
- b) Growth hormone.
- c) Somatostatin.
- d) Gonadotropin releasing hormone.
- e) Vasopressin.

Pharmacology III  
dr mahmoud taleb  
final 2016

Which of the following drug(s) can precipitate hypoglycaemia if given to a diabetic controlled with a sulfonylurea drug:

- a) Phenobarbitone.
- b) Rifampicin.
- c) Chloramphenicol.
- d) a and b.
- e) b and c

Select the anticonvulsant drug that acts as a GABAtransaminase inhibitor:

- a) Gabapentin.
- b) Vigabatrin.
- c) Lamotrigine .
- d) Topiramate.
- e) Tiagabine.

Which of the following classes of glucose-lowering agents has the ability to reduce insulin resistance?

- a)  $\alpha$ -glucosidase inhibitors.
- b) DPP-IV inhibitors..
- c) Meglitinides.
- d) Sulfonylureas.
- e) Thiazolidinediones.

5. The most dangerous adverse effect by using Fentanyl Patches is :

- a) Diarrhea.
- b) Relaxation of respiratory muscles.
- c) Hypertension.
- d) Respiratory depression.

6. Metformin acts by:

- a) Releasing insulin from pancreas.
- b) Suppressing gluconeogenesis and glucose output from liver.
- c) Up regulating insulin receptors.
- d) a and b statements are correct.
- e) b and c statements are correct.

7. Antithyroid drugs exert the following action:

- a) Inhibit thyroxine synthesis.
- b) Block the action of thyroxine on pituitary.
- c) Block the action of TSH on thyroid.
- d) Block the action of thyroxine on peripheral tissues.
- e) All of the above.

8. The most important side effects of radioactive iodine is / are :

- a) Subsequent hypothyroidism in many patients.
- b) Metallic taste in mouth.
- c) Increase blood pressure.
- d) a and b statement are.
- e) All of the above.

9. Insulin causes reduction in blood sugar level by the following mechanisms, EXCEPT

- a) Increased glucose uptake in the peripheral tissue.
- b) Reduction of breakdown of glycogen.
- c) Diminished gluconeogenesis.
- d) Decreased glucose absorption from the gut.
- e) c and d statements.

10. The primary objective for designing drugs that selectively inhibit COX - 2 is to

- a) Decrease the risk of nephrotoxicity
- b) Improve anti-inflammatory effectiveness
- c) Lower the risk of gastrointestinal toxicity
- d) Reduce the cost of treatment of rheumatoid arthritis

Which of the following are not treated with Dexamethasone?

- a) Inflammation
- b) Asthma
- c) Addison's disease
- d) Wilson's disease

Which of the following are not treated with opioid analgesics like (dextromethorphan and codeine)?

- a) Pulmonary Edema
- b) Cough suppression
- c) Sedation
- d) Pain

Reye's syndrome, a potentially fatal illness associated with liver failure and encephalopathy is associated with the administration of which over-the-counter (OTC) medication?

- a) Acetaminophen (Tylenol)
- b) Ibuprofen (Motrin)
- c) Aspirin
- d) chlorompheniramine/pseudoephedrine (Dimetapp)

Which of the following adverse effects is associated with levothyroxine (Synthroid) therapy?

- a) Tachycardia
- b) Bradycardia
- c) Hypotension
- d) Constipation

Which of the following statements about morphine is correct?

- a) It is used therapeutically to relieve pain caused by severe head injury.
- b) Its withdrawal symptoms can be relieved by naloxone.
- c) It causes diarrhea.
- d) It is most effective by oral administration.
- e) It rapidly enters all body tissues, including the fetus.

Which of the following NSAIDs propionic acid derivative?

- a) Ibuprofen.
- b) Indomethacin.
- c) Ketorolac.
- d) Diclofenac.
- e) Piroxicam.

Which of the following statements regarding Aspirin are true **EXCEPT**

- a) In contrast to most other NSAIDs, aspirin irreversibly inhibits COX.
- b) Aspirin inhibits platelet aggregation.
- c) It reduces elevated body temperature and it is used as antipyretic for children.
- d) Moderate doses of aspirin may cause salicylism (vomiting, tinnitus, decreased hearing, and vertigo).
- e) It increase oxygen consumption and increase production of CO2 thus it may induce asthma.

An adult patient who has ingested 10 gm acetaminophen 6 hours ago should be treated by

- a) Ipeca syrup
- b) Activated charcoal
- c) N-acetylcysteine
- d) Glutathine
- e) EDTA

Hydroxamate disodium is an agent primarily indicated for the treatment of

- a) Meniers syndrome
- b) Osteoporesis
- c) Crohns disease
- d) Parkinsons disease.

Currently used alpha glucosidase inhibitors include all of the following except:

- a) Acarbose
- b) Miglitol
- c) Pramlintinide
- d) Voglibose

Which of the following drugs exerts its antiseizure effect by inhibiting central effects of excitatory transmitters:

- a) Ethosuxomide
- b) Diazepam
- c) Lamotrigine
- d) Tiagbine

16. Acetaminophen has been used as a safe and effective analgesic/ antipyretic agent for over 80 years. Since it may be purchased without a prescription, it is readily available and as such the recommended dose may be exceeded. The primary toxicity leading to death from an acetaminophen overdose is:

- a) papillary necrosis and chronic interstitial nephritis
- b) pancytopenia
- c) hepatocellular necrosis
- d) hemolytic anemia

17. The most specific agent for treatment of petit mal epilepsy is:

- a) Carbamazepine
- b) Phenytoin
- c) Gabapentin
- d) Ethosuximide
- e) Primidone

18. The release of ADH is suppressed by which of the following drugs to promote a diuresis?

- a) Amlodipine
- b) Acetazolamide
- c) Chlorothiazide
- d) Water

19. The following thyroid inhibitor interferes with peripheral conversion of thyroxine to triiodothyronine:

- a) Propyl thiouracil.
- b) Carbimazole
- c) Methimazole.
- d) Radioactive iodine.
- e) All of the above.

20. Advantages of paracetamol over aspirin include all of the following EXCEPT

- a) No alteration of bleeding time
- b) Greater anti-inflammatory activity
- c) No occult blood loss
- d) No appreciable effect on uric acid excretion
- e) Less gastric irritation

**27. Glitazones:**

- a) Decreases insulin resistance and increase glucose uptake and metabolism in muscle and adipose tissue.
- b) Reduce the absorption of glucose from gut.
- c) Stimulates the B cells of the pancreas to produce insulin.
- d) All of the above.

**28. The following antiepileptic drug is associated with weight loss:**

- a) Valproate
- b) Tiagabine
- c) Pregabalin
- d) Topiramate

**29. The most common dose related side effects of carbamazepine are:**

- a) Nausea, diplopia and ataxia.
- b) Gingival hyperplasia, hirsutism
- c) Sedation, physical and psychological dependence.
- d) Hyponatremia, absence seizures

**30. The following antipsychotic has strong H1 antihistaminic activity:**

- a) Quetiapine
- b) Chlorpromazine
- c) Olanzapine
- d) All of the above

**31. Which of the following drugs produce inactivation of voltage-gated sodium channels:**

- a) Carbamazepine
- b) Lamotrigine
- c) Phenytoin
- d) A and C
- e) All of the above

**32. Which of the following drugs is not paired to the correct mechanism of action**

- a) Levitracetam- bind to synaptic vesicular protein and modulate the release of glutamate
- b) Tiagabine- inhibits GABA reuptake
- c) Primidone- enhance GABAergic transmission
- d) Lamotrigine- inhibits GABA transmission.

Which of the following antiepileptic drugs can be used for myoclonic seizures :

- a) Gabapentin.
- b) Ethosuximide
- c) Lamotrigine
- d) Carbamazepine

Which of the following antipsychotic drugs is used as good choice in management of psychosis in obese patient with parkinsonian disease:

- a) Clozapine
- b) Haloperidol
- c) Olanzapine
- d) Ziprasidone.

An obese patient with major depressive disorder stopped fluoxetine, due its marked sexual dysfunction, which one of the following drugs is a good alternative:

- a) Mirtazepine.
- b) Doxepin.
- c) Imipramine
- d) Bupropion

Glipizide:

- a) Should be used to control ketoacidosis in patient with type 2 diabetes.
- b) Requires the presence of insulin containing B-cells in the pancreas to exert its therapeutic actions.
- c) Unlike tolbutamide, does not cause hypoglycemia.
- d) All of the above are correct.

37. Withdrawal of antiseizure drugs can cause increased seizure frequency and severity. Withdrawal is least likely to be a problem with

- a) Clonazepam
- b) Diazepam
- c) Ethosuximide
- d) Phenobarbital
- e) Phenytoin

Which one of the following statements about phenytoin is accurate?

- a) Displaces sulfonamides from plasma proteins
- b) Drug of choice in myoclonic seizures
- c) Half-life is increased if used with phenobarbital
- d) Isoniazid (INH) decreases steady state blood levels of phenytoin

39. Which one of the following statements about vigabatrin is accurate?

- a) Blocks neuronal reuptake of GABA
- b) Drug of choice in absence seizures
- c) Is established to be teratogenic in humans
- d) Life-threatening skin disorders may occur

40. Which one of the following statements about the action of phenothiazines is accurate?

- a) They activate muscarinic receptors
- b) They are antiemetic
- c) They decrease serum prolactin levels
- d) They elevate the seizure threshold

41. The insulin preparation of choice in diabetic ketoacidosis is

- a) Regular insulin
- b) Lente insulin
- c) Isophane insulin
- d) Monocomponent insulin

42. Atypical antipsychotics differ from the typical agents in various ways that define them as atypical. Which of the following is not a defining property of the atypical antipsychotics?

- a) Sustained hyperprolactinemia
- b) Improved efficacy in treating the negative symptoms
- c) Lower risk for extrapyramidal symptoms (EPS)
- d) Greater serotonin receptor blockade than dopamine blockade

43. Which of the following atypical antipsychotics would be the least sedating?

- a) Quetiapine
- b) Risperidone
- c) Olanzapine
- d) Clozapine

44. Which of the following medications would most likely exacerbate a preexisting seizure disorder?

- a) Venlafaxine
- b) Trazodone
- c) Bupropion
- d) Paroxetine



Which of the following medications would be considered first-line monotherapy for the treatment of bipolar disorder?

- a) Gabapentin
- b) Lithium
- c) Risperidone
- d) Lamotrigine

Which of the following symptoms of schizophrenia are produced by following agents, except

- a) Amphetamine
- b) Apomorphine
- c) Bromocriptine
- d) Reserpine

Which drug of choice for trigeminal neuralgia is

- a) Aspirin
- b) Imipramine
- c) Carbamazepine
- d) Valproic acid

Which of the following is a narrow spectrum antiepileptic drug effective only in absence seizures

- a) Phenacetamide
- b) Ethosuccimide
- c) Sodium valproate
- d) Primidone

Which is the preferred drug for status epilepticus is

- a) Intravenous diazepam
- b) Intravenous phenytoin sodium
- c) Intramuscular phenobarbitone
- d) Rectal paraldehyde

Which of the following is true of risperidone ?

- a) It is an atypical neuroleptic which produces few extrapyramidal side effects
- b) It has combined dopamine D2 and 5-HT2 receptor blocking activity
- c) It is highly sedative
- d) Both (a) and (b)

Which of the following insulins can be administered intravenously?

- a) Regular insulin
- b) Isophane insulin (NPH)
- c) Protamine-zinc insulin (PZI)
- d) Semilente insulin
- e) Ultralente insulin

Which of the following compounds is incorrectly matched with one of its therapeutic uses?

- a) Raloxifene: Advanced breast cancer
- b) Metformin: Non-insulin dependent diabetes mellitus (NIDDM)
- c) Finasteride: Benign prostatic hyperplasia
- d) Propylthiouracil: Hyperthyroidism
- e) Tamoxifen: Estrogen-dependent breast

The insulin receptor is a

- a) Ion channel regulating receptor
- b) Tyrosine protein kinase receptor
- c) G-protein coupled receptor
- d) None of these

Carbimazole acts by inhibiting

- a) Iodide trapping
- b) Oxidation of iodide
- c) Proteolysis of thyroglobulin
- d) Synthesis of thyroglobulin protein

Bone resorption is accelerated by

- a) Estrogens
- b) Parathormone
- c) Bisphosphonates
- d) Calcitonin

Indicate an antiseizure drug, which has an effect on the T-type calcium channels in thalamic neurons?

- a) Carbamazepin.
- b) Lamotrigine.
- c) Ethosuximide.
- d) Phenyton

**51. Glucocorticoids have not been proved to be effective in the treatment of**

- a) Acute lymphocytic leukemia
- b) Addison's disease
- c) Asthma
- d) Chemotherapy-induced vomiting
- e) Osteoporosis

**52. Symptoms of hypothyroidism (myxedema) do not include**

- a) Dry, puffy skin
- b) Increased appetite
- c) Large tongue and drooping of the eyelids
- d) Lethargy, sleepiness
- e) Slow heart rate

**53. Which of the following drugs is most likely to cause hypoglycemia when used as monotherapy in treatment of type 2 diabetes?**

- a) Acarbose
- b) Glyburide
- c) Metformin
- d) Miglitol
- e) Rosiglitazone

**54. Which of the following classes of compounds stimulates the release of insulin from pancreatic  $\beta$ -cells?**

- a) Progestins
- b) Biguanides
- c)  $\alpha$ -Glucosidase inhibitors
- d) Thiourylenes
- e) Sulfonylureas

**55. Which of the following glucocorticoids produces the least sodium retention?**

- a) Cortisone
- b) Hydrocortisone
- c) Prednisolone
- d) Dexamethasone
- e) Fludrocortisone

**Question No. II True or false.**

**Please, state which statement is true and which is false and correct the false.**

**(20 pts.)**

1. (     ) Varenicline is full agonist at Nn receptor in CNS and it produces more euphoric effects than those produced by nicotine itself.
2. (     ) Naloxone is used to reverse respiratory depression of morphine toxicity and it is given by IV.
3. (     ) Tramadol is a weak Kappa receptor agonist and used in management of moderate pain.
4. (     ) Loperamide act as agonist on Mu receptor in gastrointestinal tract to decrease peristalsis, so it can be used for treatment of ulcerative colitis.
5. (     ) Mifepristone blocks cortisol synthesis by inhibiting steroid 11 beta - hydroxylase.
6. (     ) Cortisone is secreted in response to ACTH from the posterior pituitary and is suppressed by negative feedback.
7. (     ) Hashimotos thyroiditis is an autoimmune disease in which the thyroid gland is attacked by antibodies.
8. (     ) Epilepsy can be due to Genetic, CNS infection, high fever and an unknown cause.
9. (     ) Phenytoin inhibits the electrical excitability of neurons via blocking Ca channels.
10. (    ) Carbamazepine has several side effects as gingival hyperplasia, diplopia and hirsutism.
11. (    ) Gabapentin enhance GABA release but pregabalin bind to Ca channel and inhibit excitatory NTs.
12. (    ) Insulin Glargine is long acting insulin analogue in which a fatty acid bound to the lysine amino acid at position B29.
13. (    ) Sitagliptin stimulate Dipeptidyl peptidase-4 enzyme so increase Glucagon like peptide (GLP-1) and Gastric inhibitory peptide (GIP) leading to increase insulin secretion.
14. (    ) Rosiglitazone increase risk of coronary heart disease and heart attacks but pioglitazone may cause bladder cancer.

Acarbose act by delaying the diagestion of carbohydrates by inhibit alpha glucosidase enzyme in small intestine which responsible for hydrolysis of carbohydrates.

) Pramlintide is a new adjunct for diabetes type I and type II who used insulin to allow patients to use less insulin and decrease postprandial hyperglycemia.

) Physiological doses of glucocorticoids can result in increased gluconeogenesis, lipolysis and elevation of red blood count.

) Pigvisomant is analogue of growth hormone that is used for treatment of GH deficiency in children.

) For a patient suffering from both generalized and tonic clonic seizures and absence seizures, we can use ethosuximide.

) Use of desmopressin in treatment of diabetes insipidus has been largely replaced by vasopressin.

) All the typical antipsychotic agents have antiemetics effects that are mediated by blocking D2 receptors of CTZ of the medulla.

**Question No. III**

**40 Mark**

*Write mode of action, clinical uses and limitation of use of the following drugs.*

| <b>Drug</b>      | <b>Mode of action</b> | <b>Clinical uses</b> | <b>Limitation is</b> |
|------------------|-----------------------|----------------------|----------------------|
| 1- Thioreidazine |                       |                      |                      |
| 2-Meloxicam      |                       |                      |                      |
| 3-Methotrexate   |                       |                      |                      |
| 4- Allopurinol   |                       |                      |                      |
| 5- Methadone     |                       |                      |                      |

hydrocortizone

Fludra

aminoglutethimide

Amias

phenoxylate

Di

glaglibin

vild

|                      |  |  |  |
|----------------------|--|--|--|
| 10- Demoxycocin      |  |  |  |
| 11- Rosiglitazone    |  |  |  |
| 12- Calcitonin       |  |  |  |
| 13- Potassium iodide |  |  |  |
| 14- Refocoxib        |  |  |  |