

pharmacology I
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Phar Univ.
Of Pharmacy

Pharmacology I
Final Exam

Date: 19-5-2016
Time: 120 minutes

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Answer the following questions

45Mark

Question No. 1: Multiple choice questions, circle the correct answer

The drug Methoxamine is

- a) Directly acting sympathomimetic.
- b) A selective α_1 -adrenoceptor agonist that is used systemically as a pressor agent.
- c) Less potent than norepinephrine and it induces reflex bradycardia.
- d) Doesn't stimulate β -adrenoceptors as phenylephrine.
- e) All of the above are true statements.

Characteristics of salmeterol include all of the following **EXCEPT**

- a) It is a potent selective β_2 -agonist.
- b) It causes uterine relaxation.
- c) In low doses it stimulates heart rate, contractility and cardiac output.
- d) It is used in the therapy of asthma.
- e) It is suitable for pregnant women as it is not teratogenic.

Sympathomimetic agents could be used in all of the following clinical situation **EXCEPT**

- a) Hypertension
- b) Asthma.
- c) Benign prostatic hypertrophy.
- d) Common cold.
- e) Weight loss.

Which of the following NSAIDs with higher half life?

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

5. Typical results of beta-receptor activation include which one of the following?

- a) Hypoglycemia
- b) Lipolysis
- c) Glycogen synthesis
- d) Decreased skeletal muscle tremor
- e) Decreased rennin secretion

6. Select the correct statement from the following about β_1 - adrenergic receptor agonists

- a) Isoproterenol > epinephrine \geq norepinephrine
- b) Epinephrine > isoproterenol > norepinephrine
- c) Isoproterenol = epinephrine \geq norepinephrine
- d) Epinephrine \geq norepinephrine > isoproterenol

7. While undergoing a surgical procedure a patient develops hypotension. Which of the following drugs can be injected intramuscularly to raise his BP

- a) Noradrenaline
- b) Isoprenaline
- c) Mephentermine
- d) Isoxsuprine

8. Guanethidine inhibits

- a) Synthesis of transmitter
- b) Metabolism of transmitter
- c) Release of transmitter
- d) Displacement of transmitter from axonal terminal

9. β_3 receptor is present in

- a) Adipose tissue
- b) Smooth muscle
- c) Heart
- d) All of the above

10. 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).

Sodium docusate, results in laxative effect

- a) Inhibiting peristalsis movement
- b) Affecting on surface tension of stool.
- c) By osmotic effect.
- d) bulking effect.

The following NSAID accumulated in synovial fluid and it is suitable for chronic management of musculoskeletal disorders

- a) Diclofenac.
- b) Etodolac.
- c) Celecoxib.
- d) Meloxicam.
- e) None of the above statements are true.

Which of the following NSAIDs is a non selective COX inhibitor

- a) Indomethacin
- b) Rofecoxib.
- c) Celecoxib.
- d) Etoricoxib.

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 unpredictable effect on uric acid excretion
- e) Less gastric irritation.

Which of the following enzymes is ultimately responsible for the production of prostaglandins associated with inflammatory reactions?

- a) Phospholipase
- b) Lipoxygenase
- c) Cyclooxygenase-I
- d) Cyclooxygenase II
- e) Xanthine oxidase

16. 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
 - e) Selectively decrease thromboxane A₂ without effects on other eicosanoids
17. The drug phenylephrine is
- a) Directly acting sympathomimetic.
 - b) A selective α_1 - adrenoceptor agonist that is used systemically as a presser agent.
 - c) Less potent than norepinephrine and it induces reflex bradycardia.
 - d) Doesn't stimulate β -adrenoceptors as phenylephrine.
 - e) All of the above are true statements.
18. A 50- year old female with a blood pressure of 180/95 mm Hg is treated with Prazocin. What is the mechanism of action ?
- a) α - adrenergic receptor agonist.
 - b) α - adrenergic receptor antagonist.
 - c) B- adrenergic receptor agonist .
 - d) Ganglionic blocking agent.
 - e) Angiotensin converting enzyme inhibitor
19. 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
20. A patient arriving in a hospital emergency room suffering from severe hypertensive crisis most likely treated initially with
- a) Guanthidine
 - b) Methyldopa
 - c) Reserpine
 - d) Diazoxide
 - e) Hydrochlorothiazide

All of the following statements regarding norepinephrine are true

- a) It is synthesized in the nerve terminal of sympathetic preganglionic fibers.
- b) It is rapidly degraded in the synaptic cleft by MAO enzyme.
- c) It is stored in vesicles at the nerve terminal sympathetic postganglionic fiber in the form of complex with ATP.
- d) Its release is enhanced by α_2 receptor.
- e) All of the above statements are true.

Our patient is to receive a selective β_2 stimulant drug β_2 selective stimulant are effective in

- a) Angina due to coronary insufficiency
- b) Asthma
- c) Chronic heart failure
- d) Delayed or insufficiently strong labor
- e) All of the above

Which of the following drugs is the drug of choice in anaphylaxis associated with bronchospasm and hypotension ?

- a) Cortisone
- b) Epinephrine
- c) Isoproterenol
- d) Norepinephrine

Which of the following effects of epinephrine would be blocked by phentolamine not by metoprolol ?

- a) Cardiac stimulation
- b) Contraction of radial smooth muscle in the iris
- c) Increase of cAMP in fat
- d) Relaxation of bronchial smooth muscle
- e) Relaxation of the uterus

Propranolol is useful in all of the following except

- a) Angina
- b) Familial tremor
- c) Hypertension
- d) Idiopathic hypertrophic subaortic cardiomyopathy
- e) Partial atrioventricular heart block

26. The antianginal effect of propranolol may be attributed to which one of the following
- Block of exercise – induced tachycardia
 - Decreased end – diastolic ventricular volume
 - Dilation of constricted coronary vessels
 - Increased cardiac force
 - Increased resting heart rate
27. Postural hypotension is a common adverse effect of which one of the following types of drugs ?
- ACE inhibitors
 - Alpha-receptor blockers
 - Arteriolar dilators
 - B1 – selective receptor blockers
 - Nonselective $\beta 1 \beta 2$ - blockers
28. d-Amphetamine is not used in
- Narcolepsy
 - Hyperkinetic child (specilly attention deficit disorder)
 - Migraine
 - As appetite suppressant
29. Which of the following is not treated with (Ephedrine)?
- Asthma
 - Hypotension
 - Congestion
 - Incontinence of urine
30. Which of the following are not treated with Lansoprazole?
- Zollinger-Ellison syndrome
 - Gastritis
 - Hypertension
 - Reflux
- 31 . Ahmed is patient taking famotidine (Famodin) asks the pharmacist what would be the best medication to take for a headache. Pharmacist tells the pateint that it would be best to take:
- aspirin (acetylsalicylic acid, ASA)
 -) ibuprofen (Motrin)
 - acetaminophen (Tylenol)
 -) naproxen (Naprosyn)

pack soaked in drug)?

- a) Phenylephrine
- b) Epinephrine
- c) Oxymentazoline
- d) Isoproterenol

Which of the following sympathomimetics acts indirectly?

- a) Epinephrine
- b) Norepinephrine
- c) Ephedrine
- d) Methoxamine

The following statement is true regarding the drug Atenolol

- a) It is a selective β_1 -adrenoceptor blocker that is used in treatment of hypertension.
- b) It has not intrinsic sympathomimetic activity, or effect on central nervous system.
- c) It may cause sexual dysfunction and delay recovery from hypoglycemia.
- d) It has additive effect with prazosin.
- e) All of the above statements are true.

The following property combination is characteristic to the majority of NSAIDs

- a) Antihistaminic, antipyretic, analgesic.
- b) Immunodepressive, anti-inflammatory, analgesic.
- c) Antipyretic, analgesic, anti-inflammatory.
- d) Anti-inflammatory, immunodepressive, antihistaminic.
- e) All of the above statements are true.

Beta adrenoceptor subtypes is contained in all of the following tissues EXCEPT:

- a) Bronchial muscles
- b) Heart
- c) Pupillary dilator muscle
- d) Fat cells

Hyperglycemia induced by epinephrine is due to:

- a) Gluconeogenesis (beta2)
- b) Inhibition of insulin secretion (alpha)
- c) Stimulation of glycogenolysis (beta2)
- d) All of the above

38. Characteristics of ephedrine include all of the following EXCEPT:

- a) It acts primarily through the release of stored catecholamines
- b) It is a mild CNS stimulant
- c) It causes tachyphylaxis with repeated administration
- d) It decreases arterial pressure

39. Which of the following drugs is a reversible nonselective alfa, beta antagonist?

- a) Labetalol
- b) Phentolamine
- c) Metoprolol
- d) Propranolol

40. Which of the following drugs may cause reversible gynecomastia?

- a) Omeprazole
- b) Pirenzepine
- c) Cimetidine
- d) Sucralfate

41. Tick the mechanism of Metoclopramide antiemetic action:

- a) H1 and H2-receptor blocking effect
- b) M-cholinoreceptor stimulating effect
- c) D2-dopamine and 5-HT3-serotonin receptor blocking effect
- d) M-cholinoblocking effect

42. Select the drug which inhibits peristalsis:

- a) Castor oil
- b) Bisacodyl
- c) Loperamide
- d) Sorbitol

43. Gastric acid secretion is under the control of the following agents EXCEPT:

- a) Histamine
- b) Acetylcholine
- c) Serotonin
- d) Gastrin

44. Tick the drug forming a physical barrier to HCL and Pepsin:

- a) Ranitidine
- b) Sucralfate
- c) Omeprazole
- d) Pirenzepine

All of the following drugs intensify gastrointestinal motility EXCEPT:

- doxamine
- metoclopramide
- promethazine
- propranolol

All of these drugs reduce intestinal peristalsis EXCEPT:

- metoclopramide
- propranolol
- methyl cellulose
- magnesium aluminum silicate

Question No. II

20 Mark

Compare between the followings

1- Mechanism of action and side effect of reserpine and α - methyl dopa

2- Pharmacological actions of propranolol and prazosin.

3- Mechanism of action of Colchicine and etanercept and their uses.

4- Pharmacological actions of different doses of aspirin.

5- Uses and Limitation of uses of phenoxybenzamine.

Question No. III Complete the table**35 Mark**

Drug	Mechanism of action	Clinical uses	Contraindication
1- Albuterol			
2- Clonidine			
3- Timolol			
4- Naphazoline			
5- Bismuth subsalicylate			
6-Bisacodyl			

Infliximab

Carvidilol

Allopurinol

Auronafin

Misopristol

Aluminium
oxide gel

Therapy of osteoarthritis differed than of rheumatic arthritis than of rheumatoid arthritis.

Laxatives are indicated in some situations and contraindicated in others.

Peptic ulcer is a disease of different origin and different mechanism of therapy.