Q.P. CODE:
DR NTR UNIVERSITY OF HEALTH SCIENCES :: AP :: VIJAYAWADA
B.Sc(Nursing) DEGREE EXAMINATIONS – , FIRST YEAR EXAMINATION – 4 YDC PHARMACOLOGY
(NEW SCHEME)

Time: 3:00 Hours
Max. Marks: 75

Instructions:

a) All questions are compulsory

b) Draw diagrams wherever necessary

c) Answers of Questions and Sub-questions must be written strictly according to serial order of question paper.

d) MCQ has to be answered in theory answer book

e) Please write MCQ answer neatly and in serial order with black or blue pen in brackets; for example: - 1. (a) 2. (c)

f) MCQ has to be answered only once, any kind of repetition or cutting or erasing or whitener will be considered as malpractice, such answers will not be counted in marks and action will be taken according to UFM rules of university.

g) Subjective answer should be answered in up to 30 words per marks. For example, if a question having 2 marks should answered in up to 60 marks.

Q1. Total MCQs: 16

1) Which of the following is a PHARMACODYNAMIC process?

(a) Biochemical alteration of the drug by liver enzymes
(b) Drug metabolites are removed in the urine
(c) Movement of drug from the gut into general circulation
(d) The drug causes receptor stimulation and response

2) Which out of the following is the mechanism by which this adrenoceptor agonist produced bronchodilation?

(a) Increased cyclic AMP
(b) Decreased cyclic GMP
(c) Decreased IP3
(d) Calcium influx

3) Topical administration to the eye of which of the following agents is likely to induce mydriasis and cycloplegia?

(a) Beta blocker
(b) Alpha blocker
(c) Alpha agonist
(d) Muscarinic blocker

4) A patient on neostigmine therapy for Myasthenia gravis complains of progressive fatigue and diplopia who was otherwise well controlled previously. Infusion of low dose edrophonium elicits a significant improvement in her muscle strength. Which of the following is the best next step in the management of this patient?

(a) Increase neostigmine dosage
(b) Administer pralidoxime
(c) Stop neostigmine temporarily
(d) Add low dose propranolol

5) Which of the following is the drug of choice for essential hypertension with benign prostatic hyperplasia (BPH)?

(a) Propranolol
(b) Prazosin
(c) Neostigmine
(d) Dopamine

6) Which of the following is most likely to occur with the use of this beta blocker?

(a) Bronchodilation, hypotension, and hyperglycemia
(b) Bronchoconstriction, hyperglycemia, and hyperlipidemia
(c) Urination, diarrhea, and mydriasis
(d) Migraine headaches, hypertension, and tocolysis (uterine relaxation)

7) Which of the following antihistamines would be the MOST appropriate treatment for a 32-year-old airline pilot who has a long history of seasonal allergic rhinitis and complains of postnasal drainage, coughing, and throat irritation?

(a) Diphenhydramine
(b) Fexofenadine
(c) Promethazine
(d) Chlorpheniramine

8) A diuretic which acts in the thick ascending loop of the nephron would cause:

(a) Hyporeninemia, hyperkalemia, and hypermagnesemia
(b) Hypercalcemia, hyperlipidemia, hypokalemia, and hyperuricemia
(c) Hyperglycemia, hypokalemia, and metabolic acidosis
(d) Hypokalemia, hypomagnesemia, and preferential vasodilation in renal vasculature

9) A 49-year-old female with post-surgical deep-vein thrombosis (DVT) is given a bolus of heparin, and a heparin drip is also started. Twenty-five minutes later, she starts bleeding profusely from the intravenous site. The heparin is stopped, but the bleeding continues. The attending physician decides to give a counteragent to the adverse effect of heparin. What drug was given?

(a) Factor XII
(b) Aspirin
(c) Protamine sulfate
(d) Vitamin K

10) A class of anti-anginal medications with multiple mechanisms of action that include: decreased preload, decreased oxygen demand, decreased afterload (at high doses), and increased myocardial oxygen delivery by dilating large epicardial arteries.

(a) Beta blocker
(b) Calcium channel blocker

(c) Nitrate
(d) Anti-platelet drug

11) In a 32-year-old woman with a long history of bronchial asthma, the use of mometasone aerosol for treatment is likely to produce which of the following?

(a) Diabetes mellitus
(b) Essential hypertension
(c) Truncal obesity
(d) Voice hoarseness

12) A patient undergoing cancer chemotherapy is administered an antiemetic agent that is an antagonist at the 5HT3 receptor. Which drug was used in this case?

(a) Buspirone
(b) Cyproheptadine
(c) Ondansetron
(d) Sumatriptan

13) A 54-year-old man is being treated for peptic ulcer disease and subsequently develops gynecomastia. Which of the following drugs is he most likely taking?

(a) Cimetidine
(b) Misoprostol
(c) Omeprazole
(d) Ranitidine

14) A new drug has been developed with the following characteristics: when 100 mg of the drug is injected, 95 mg remains after 2 hours, 90 mg remains after 4 hours, and 85 mg remains after 6 hours. This drug shows elimination properties similar to which of the following drugs in high doses?

(a) Aspirin

(b) Clonidine
(c) Morphine
(d) Propranolol

15) Neostigmine will effectively antagonize skeletal muscle relaxation produced by:

(a) Pancuronium
(b) Succinylcholine
(c) Diazepam
(d) Baclofen

16) A 42-year-old male with an acute MI is given streptokinase. What is the mechanism of action of streptokinase?

(a) Inhibition of platelet thromboxane production
(b) Antagonism of ADP receptor
(c) Glycoprotein IIb/IIIa antagonist
(d) Activation of plasminogen to plasmin

Q2. Long Answer Questions

a. Enumerate 4 commonly prescribed Angiotensin Converting Enzyme Inhibitors (ACEIs). Write 4 uses of ACEIs and explain the underlying pharmacological mechanism of therapeutic benefits for each of those uses. Enumerate 4 adverse effects of ACEIs.

b. Classify drugs used in Peptic Ulcer Disease. Write the mechanism of action, uses, and adverse effects of Proton Pump Inhibitors (PPIs). Mention one drug regimen for the treatment of Helicobacter pylori infection.

Q3. Brief Answer Questions

a. Enumerate Low Molecular Weight Heparins (LMWHs). Write advantages of LMWHs in comparison to Unfractionated Heparin.

b. Compare and contrast between Zero-order and First-order kinetics of drug elimination.

c. Write the mechanism of action, uses, adverse effects, and contraindications of Osmotic diuretics.

d. Enumerate uses of adrenaline and discuss the management of anaphylactic shock.

Q4. Short Answer Questions

a. Mention 4 factors that can alter the apparent volume of distribution of a drug.

b. Explain the pharmacological basis of the combination of adrenaline and lignocaine in most local anesthetic combinations available in the market.

c. Explain the pharmacological basis of the combination of Hydrochlorothiazide and Triamterene.

d. Enumerate 2 drugs each for acute and long-term treatment of Migraine.

e. Enumerate 2 drugs belonging to two different groups used in the treatment of hypertensive emergency.

f. Explain the pharmacological basis of the combination of Calcium and Magnesium salts in most antacid preparations.

g. Write 2 examples of competitive antagonists.

h. Enumerate 2 drugs used in the treatment of productive

cough.

i. Name one important drug interaction of sildenafil citrate.

j. Name a drug for Paroxysmal Supraventricular Tachycardia.

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