

UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF GENERAL NURSING SCIENCE
MAIN EXAMINATION PAPER MAY 2017

COURSE CODE	: GNS 208
COURSE TITLE	: PHARMACOLOGY FOR NURSES
TOTAL MARKS	: SEVENTY-FIVE (75)
DURATION	: TWO (2) HOURS

INSTRUCTIONS:

1. THE PAPER HAS TWELVE PAGES (inclusive of front page)
2. EXAMINATION CONTENT IS DIVIDED INTO THREE SECTIONS: A, B & C
3. ANSWER ALL QUESTIONS IN THE THREE SECTIONS
4. INSTRUCTIONS ARE GIVEN AT THE BEGINNING OF EACH QUESTION OR SUBSECTION
5. FIGURES IN BRACKETS INDICATE MARKS ALLOCATED PER QUESTION OR A PART OF THE QUESTION.
6. HANDWRITING MUST BE LEGIBLE.

DO NOT OPEN THE EXAMINATION PAPER UNTIL PERMISSION HAS BEEN GIVEN BY THE INVIGILATOR

SECTION A

INSTRUCTIONS:

1. Write the most appropriate answer in your answer booklet using UPPERCASE.
2. Example: 1.1 = D, 1.2 = A, and so forth.
3. There are 45 multiple choice questions/statements in this section and each is worth one point.

1.1 Which one of the following organs plays the largest role in detoxifying medication? The

- A. lungs
- B. liver
- C. kidneys
- D. intestines

1.2 Sources of drugs include

- A. minerals
- B. plants
- C. animals
- D. all the above

1.3 Drugs undergo biological changes in the body. One process affecting this is _____ .

- A. tolerance
- B. dependence
- C. metabolism
- D. addiction

1.4 Drug toxicity from cumulative effects may result from _____ .

- A. intracranial pressure
- B. glaucoma
- C. kidney malfunction
- D. high blood pressure

1.5 Which of the following organs plays the largest role in excreting drugs from the body? The

- A. lungs
- B. liver
- C. kidneys
- D. intestines

1.6 Drugs that when taken together potentiate each other are referred to as being

- A. antagonistic
- B. catabolistic
- C. anabolistic
- D. synergistic

- 1.7 Half-life refers to the time needed for the total amount of a drug to decrease by
- A. 95%
 - B. 75%
 - C. 50%
 - D. 25%
- 1.8 Polypharmacy is readily associated with _____ .
- A. pregnant women
 - B. elderly persons
 - C. children
 - D. lactating mothers
- 1.9 A 24-year-old college student is brought to the student wellness center, wheezing with stridor. Her assessment findings are as follows: Vital signs (VS):Pulse =98, BP= 128/88, Temp= 37, RR= 36. Medications: Doxycycline for 3 days and Birth control pills
Laboratory tests: Finger-stick glucose 78. The nurse would recognize this as a(n):
- A. anaphylactic reaction
 - B. side effect
 - C. idiosyncratic reaction
 - D. therapeutic effect
- 1.10 The nurse has counselled a client about taking Glyceryl Trinitrate (TNT) sublingually. The nurse understands that the client needs further teaching when the client utters the following statement
- A. "I should put my medication under my tongue each time"
 - B. "I should not swallow the medication"
 - C. "I should not drink water while taking the medication"
 - D. "I should keep taking the pill every 5 minutes until my chest pain is relieved"
- 1.11 Gloves are worn when administering specifically topical skin medication so as to
- A. prevent contracting infection from the client
 - B. facilitate smooth entry of medication into the client's skin
 - C. prevent from absorbing that same drug by the one who is applying it
 - D. none of the above
- 1.12 Rectal suppositories are best inserted
- A. when lubricated with petroleum jelly (Vaseline)
 - B. without additional lubrication
 - C. when moistened with warm water
 - D. when lubricated with water-soluble jelly

- 1.13 For effective administration of salbutamol through inhalation the nurse will instruct the client
- A. must inhale and quickly exhale
 - B. must inhale first, hold his/her breath for a few seconds and then exhale
 - C. inhale first, hold his/her breath for about ten minutes and then exhale
 - D. inhale first, tilt her/his head back for 2 minutes and then exhale
- 1.14 Before administering nurosterate enanthate intramuscularly to a client, the nurse must remind same to
- A. massage vigorously the site of injection
 - B. apply only thumb pressure to the site of injection
 - C. keep a watch of the site of injection
 - D. apply a band aid to the site of injection
- 1.15 Which one of the four prescriptions denotes first line antiretroviral treatment for a non pregnant adult?
- A. TDF + 4TC + EFV
 - B. TDF + 3TC + EFV
 - C. TDF + 4TC + NVP
 - D. TDF + 3TC + NVP
- 1.16 Intravenous medication administration poses additional risks because
- A. larger amounts are given
 - B. more potent drugs are always given IV
 - C. medications are immediately available to the blood stream
 - D. absorption by veins is unpredictable
- 1.17 Enteric-coated tablets
- A. may be administered together with antacids
 - B. are designed to carry drugs that may irritate the stomach
 - C. are designed to dissolve in the stomach
 - D. can be crushed before administration
- 1.18 According to the Standard Treatment Guidelines and Essential Medicines List of the Kingdom of Swaziland (2012), drugs are to be prescribed using their
- A. trade names
 - B. chemical names
 - C. proprietary names
 - D. generic names

- 1.19 Which of the following classes of drugs would most likely predispose a client to digitalis toxicity?
- A. salicylate analgesics
 - B. tetracycline antibiotics
 - C. diuretics
 - D. barbiturates
- 1.20 Tinnitus is often reported by clients who are on prolonged drug treatment with
- A. gentamycin
 - B. ampicillin
 - C. amoxicillin
 - D. streptomycin
- 1.21 A client comes to the clinic complaining of unexplained bruises and bloody appearing urine. Which medication is most important to find out if the client is taking?
- A. cloxacillin
 - B. phenergan
 - C. ferrous sulphate
 - D. warfarin
- 1.22 A client is being discharged home on methyldopa 250mg bd. In stock at the dispensary there are 500mg tablets only. How many tablets will be dispensed if the client is to be seen again by the doctor in 14 days' time?
- A. seven
 - B. ten
 - C. fourteen
 - D. twenty eight
- 1.23 An expectant client may NOT be prescribed
- A. tetracycline
 - B. folic acid
 - C. myogel
 - D. nystatin pessaries
- 1.24 You have just finished instructing Mrs Zulu on measures to help the body fight infection. Which of the following statements by the client would lead you to believe that she needs additional instruction regarding taking antibiotics?
- A. "I will make sure I get adequate rest"
 - B. "I know I must continue to eat a balanced diet and drink lots of fluids"
 - C. "I will take my medicine until I no longer have a fever"
 - D. "I will wash my hands often"

- 1.25 Health education by the nurse is as an integral component of client care. Mr. Ndlovu taking captopril tablets. He needs to be informed that those tablets may cause him to experience a common adverse effect of the angiotension-converting enzyme inhibitors (ACE inhibitors) such as
- A. persistent cough
 - B. increased appetite
 - C. hypertension
 - D. sedation.
- 1.26 Mrs. Mhlanga has been prescribed both heparin and warfarin by the physician. When preparing to administer the two anticoagulant drugs to the client, what rationale would the nurse consider appropriate?
- A. It takes 12–24 hours before the action of oral anticoagulants is evident
 - B. Heparin is more effective when combined with warfarin.
 - C. The combination of the two drugs is synergistic.
 - D. The client is less likely to experience adverse effects
- 1.27 Soluble insulin is manufactured in strengths of _____ per vial.
- A. 20 units
 - B. 40 units
 - C. 80 units
 - D. All the above
- 1.28 Clients who are on anticoagulant therapy need to monitor their _____ regularly.
- A. blood pressure
 - B. prothrombin time
 - C. liver functioning
 - D. body weight
- 1.29 If a bronchodilator and a corticosteroid are to both be administered at the same time, the nurse will
- A. give the bronchodilator first.
 - B. give the corticosteroid first
 - C. mix the two drugs and administer
 - D. find out from the doctor which one to administer first
- 1.30 Bulk-forming laxatives should always be taken with
- A. 30 ml orange juice
 - B. 45 ml milk
 - C. 120ml of any liquid
 - D. 240 –300 ml of water or juice

- 1.31 Client teaching regarding long-term corticosteroid therapy should include the
- A. need for periodic blood glucose assessment
 - B. need to take the medication late in the day to avoid daytime drowsiness
 - C. possibility of enhanced wound healing
 - D. need for a diet low in iron
- 1.32 A serious concern in health care is the development of increasing numbers of antibiotic-resistant strains of bacteria. To help prevent this problem, clients must be taught to
- A. complete the entire prescription of antibiotics
 - B. not to share their antibiotic prescription with other family members with the same symptoms
 - C. not to stop taking their antibiotic medications when they begin to feel better
 - D. all the above
- 1.33 You receive a medication order with no specified route of administration. What line of action will you take?
- A. Give the medication orally because that is the most common route.
 - B. Ask the client how he usually takes the medication.
 - C. Call the physician to clarify the order.
 - D. Seek the opinion of another nurse about what alternative route to use
- 1.34 A physician orders nitroglycerin (Nitro bid) 0.4 mg SL now. Which of the following options would indicate that the nurse correctly administered the medication? The tablet is
- A. placed under the client's tongue and client instructed to allow it to dissolve
 - B. swallowed with water after checking the clients blood pressure and heart rate
 - C. given to the client with juice to in order to mask the bitter after taste
 - D. placed on the client's tongue and client is instructed to chew it slowly and swallow
- 1.35 A client who suffers form anxiety may benefit from small doses of
- A. declofenac
 - B. diazepam
 - C. pethidine
 - D. Vitamin B complex
- 1.36 Which question should be asked of a young adult female for whom penicillin has been ordered?
- A. Do you drink milk?
 - B. Are you allergic to shell fish?
 - C. Do you take birth control pills?
 - D. Have you ever had vaginitis?

- 1.37 Controlled drugs include
- A. digoxin and Glycerine trinitrate
 - B. salbutamol and buscopan
 - C. ampicillin and ibuprofen
 - D. pethidine and morphine
- 1.38 Prior to administering a new drug, the nurse must know about its
- A. absorption rate
 - B. distribution process
 - C. excretion rate
 - D. indication for use and side effects
- 1.39 An antibiotic with photosensitivity listed as a side effect could cause
- A. deafness
 - B. sunburn
 - C. blindness
 - D. kidney damage
- 1.40 Streptomycin particularly as part of anti tuberculosis treatment, is administered
- A. intradermally
 - B. intravenously
 - C. intramuscularly
 - D. subcutaneously
- 1.41 The nurse will not administer the drug _____ if the client's pulse rate is below 60 beats per minute.
- A. glycerine trinitrate
 - B. digoxin
 - C. morphine
 - D. salbutamol
- 1.42 Which one of the following drugs will be prescribed for a client who has type two diabetes mellitus to control her/her blood sugar levels?
- A. warfarin
 - B. doxycycline
 - C. metformin
 - D. furosemide
- 1.43 A client with gastric reflux must avoid taking
- A. myogel
 - B. aspirin
 - C. cold and flue
 - D. paracetamol

- 1.44 Which of the following is critical to monitor prior to administering digoxin?
- A. blood pressure
 - B. radial pulse rate
 - C. apical heart rate
 - D. respiratory rate
- 1.45 Select the preferred route of administration of bronchodilators in order to minimize systemic adverse effects?
- A. oral route
 - B. parenteral route
 - C. sublingual route
 - D. per inhalation

[45 points]

SECTION B
Miscellaneous questions

QUESTION 2

This question three subsections to it and worth 15 points

Subsection 1

INSTRUCTION: Write down only in your answer book the right example 2.1 = right patient, 2.2 right effect and so forth. Do NOT include the two that have been given as examples.

2. Name any five of the eight 'R's of administering drugs to clients by nurses (5 points)

- 2.1 The _____
- 2.2 The _____
- 2.3 The _____
- 2.4 The _____
- 2.5 The _____

[5 points]

Subsection 2**INSTRUCTION:** for 2.6 through 2.15

From 2.11 through 2.18 you are required to match the abbreviation in **Column A** with the corresponding Roman number in **Column B**. Example: 2.6 = ii, 2.7 = v, and so forth. Each item carries ½ a mark (½ x 10 = 5)

Column A – medical abbreviation	Column B – meaning of abbreviation
2.6 tds =	i. four times a day
2.7 bd =	ii. before meals
2.8 nocte =	iii. whenever necessary
2.9 od =	iv. immediately
2.10 ac =	v. by mouth
2.11 pc =	vi. once a day
2.12 prn =	vii. twice a day
2.13 stat =	viii. three times a day
2.14 qds =	ix. at night
2.15 po =	x. after meals

(5 points)

Subsection 3

INSTRUCTION: For 2.21 through 2.20 complete the following conversions thus: 2. Example: 2.21 = 10g, 2.2 = 44mg, and so forth. Each correct answer is worth one point.

- 2.16 1000 mcg = _____ g
 2.17 2g = _____ mg
 2.18 500mg = _____ kg
 2.19 0.5L = _____ ml
 2.20 60mg = _____ mcg

(5 points)

[15 points]**SECTION C****Drug and IV calculation related questions****INSTRUCTION:**

Write only the correct answers in your answer book.

You may use one part of your answer book to do the actual calculations but at the end write all your answers on a clean page as per example.

Example: 3.1 = d, 3.2 = b, and so forth

- 3.1 The physician orders gentamicin (Garamycin) for a child weighing 40kg. If the dose range is 6 –7.5 mg/kg/d, and the child is to receive the medication three times a day, what is the therapeutic range for a single dose for this child? (1)
- A. 20mg – 40 mg
 B. 50mg –70 mg
 C. 80mg –100 mg
 D. 110mg –130 mg

- 3.2 The physician ordered penicillin (Penicillin G) 250,000 units intravenously. In stock there is penicillin 20,000,000 units in 20 ml. In how many ml is the ordered dose? (1)
- A. 0.25 ml
 - B. 4 ml
 - C. 16 ml
 - D. 25 m
- 3.3 The physician ordered digoxin (Lanoxin) 0.125 mg p.o. every day. The nurse has digoxin 0.25 mg scored tablets. How many tablet(s) should the nurse administer? (1)
- A. 1/2 tablet
 - B. 1 tablet
 - C. 1.5 tablets
 - D. 2 tablets
- 3.4 Digoxin (Lanoxin) 0.25 mg po every day has been ordered for a client who is being discharged from a medical ward and returning to the the outpatient department for review in five days' time. In stock there are digoxin tablets whose strength is 0.125 mg tablets. How many tablets will be dispensed as drugs to take home with the client? (1)
- A. 5 tablets
 - B. 10 tablets
 - C. 15 tablets
 - D. 20 tablets
- 3.5 How much albendazole will be administered to a 15-month-old infant? (1)
- A. 100 mg
 - B. 200 mg
 - C. 300 mg
 - D. 400 mg
- 3.6 A client is to be administered with 60 units of soluble insulin. In stock there a vial of soluble insulin 100 unit per ml. How many ml of soluble insulin would a nurse draw up? (1)
- A. 1.0ml
 - B. 0.8ml
 - C. 0. 6ml
 - D. 0.4ml
- 3.7 How much time will it take to transfuse 3000 ml of NaCl if the client is to receive exactly 125 ml per hour? (1)
- A. 6 hours
 - B. 12 hours
 - C. 18 hours
 - D. 24 hours

- 3.8 If a client is to be administered with soluble insulin subcutaneously with 40 units and in stock there is a 100 units/ml vial of soluble insulin, how much insulin should be drawn up? (1)
- A. 1.0ml
 - B. 0.5ml
 - C. 0.8ml
 - D. 0.4ml
- 3.9 The infusion set is adjusted for a drop factor of 15 gtt/ml. Calculate the IV flow rate if 1500 ml IV saline is ordered to be infused over 12 hours. (1)
- A. 41 gtt/min
 - B. 31 gtt/min
 - C. 21 gtt/min
 - D. 11 gtt/min
- 3.10 The physician orders amoxicillin 7.5 ml q 8 hour. The amoxicillin on hand is 125 mg/5 ml. (2)
- A. How many mg will the client receive per dose? (1)
 - B. How many mg will the client receive per day? (1)
- 3.11 A client is to be administered with 75mg of Drug X. In stock there are 100mg/2ml dose vials of Drug X. How many ml will the nurse administer to the client? (1)
- a. 0.5 ml
 - b. 1.0 ml
 - c. 1.25 ml
 - d. 1.5ml
- 3.12 A client has an order to receive 800 units of Heparin per hour by continuous intravenous infusion. If the pharmacy mixes the IV bag to contain a total of 5,000 units of Heparin in 500 ml of D5W, how many ml per hour should the patient receive? (1)
- 3.13 Baby Florence Ngwenya weighs 8kg and is to be administered 3.75 mg/kg PO of Drug X for 3 days only. The drug is to be given tds in equally divided doses. Calculate the dosage that will be administered each time she receives Drug X. .
- 3.14 How many tablets would be administered if furosemide (Lasix) 0.04g PO was to be given to a client every day and in stock there were 20 mg tablets only? (1)

[15 points]