



**AFE
BABALOLA
UNIVERSITY
ADO-EKITI (ABUAD)**
KM 8.5 AFE BABALOLA WAY, ADO-EKITI, EKITI STATE, NIGERIA
P.M.B. 1454, ADO EKITI

**DEPARTMENT OF PHARMACOGNOSY
COLLEGE OF PHARMACY**

FIRST SEMESTER (PHARM.D) EXAMINATION 2021/2022 SESSION

COURSE: PCG 301 Practical

Level: 300

Time Allowed: 2 hours (9:30- 11:30AM)

INSTRUCTIONS:

1. Answer ALL Questions
2. Answer all the questions in your answer booklet
3. Write your Matriculation number in the space provided in your answer booklet

QUESTION 1

Observe Sample A and B and describe the shape, apex and margin

QUESTION 2

Describe the Specimen under the microscope with the aid of a well labelled diagram

QUESTION 3

1. Weigh 20g of Sample C given and spread on a clean white paper
2. Inspect with unaided eye and pick out any foreign matter (other than leaflets) from the sample
3. Weigh the unwanted material

DEPARTMENT OF PHARMACEUTICAL AND MEDICINAL CHEMISTRY
COLLEGE OF PHARMACY
AFE BABALOLA UNIVERSITY
2022/2023 Session; First Semester

PCH 301: Organic Pharmaceutical Chemistry I (Practical Examinations)

TIME ALLOWED: 3 Hours

24th JANUARY, 2023

GROUP: B

Matric Number:

ATTEMPT ALL QUESTIONS

1. [Total: 40 marks]

- a. Sample E is a mixture containing two chemical substances. Carry out the assay below to recover the desired substance.
- ✓ i. Weigh 1.8 – 2.0 g of sample E into a 250 mL conical flask and label as such. Add a pinch of boiling chip. Add 50 mL of hot water to the mixture and swirl.
 - ✓ ii. Place the flask on a hot plate and boil for 5 minutes.
After while hot and allow to cool.
 - ✓ iii. Remove the flask from the hot plate and allow it to cool.
 - iv. Place the flask in an ice bath for 5-10 min to ensure complete crystallization.
 - v. *When the flask is cold and crystallization is complete,* filter the crystals by suction.
 - vi. Wash the crystals with 5 mL of ice-cold water, and repeat once.
 - vii. Dry the crystals in the oven at 50 °C and calculate the percentage yield of your dried product.
 - viii. Carry out the thin layer chromatography (TLC) of the product using 10 mL of sample F as mobile phase and calculate the R_f .
 - ix. Submit your product labeled with your matriculation number at the end of the experiment.
- b. State four precautions taken during the experiment.
- c. What is the role of boiling chips in the experiment? *→ prevent bumping*

2. [Total: 20 marks]

- a. A batch of paracetamol tablets produced by Drugfield Pharmaceuticals Limited was suspected to be fake. As a Quality Control Analyst, explain how you will ascertain the authenticity of the raw powdered drug. (Melting point of pure paracetamol: 169 – 171 °C).
- b. What will be your recommendation to avoid any future occurrence?
- c. Write three (3) factors that determine the choice of solvent in crystallization technique.

- Page
18. The addition of a different substance to a drug in lieu of the actual certified component is called. Substitution
 19. A high ash value indicates. Contamination.....
 20. High moisture content in crude drug prevents deterioration by aiding microbial growth, True or False

Section B

Climate, Rainfall, Soil, Temperature, Humidity, Altitude, Length of storage

1a. Mention Seven (7) factors affecting Cultivation

b. Briefly discuss any two of the factors stated above.

2. What is the Importance of studying Enzymes in Pharmacognosy?

3. Describe Papain and state its uses

4. List Five (5) Physical Parameters used in the Evaluation of Crude Drugs

- Total ash.
- Extractive value.
- Moisture content.
- Volatile Oil.
- Refractive Index.
- Optical Refraction.

Physical Parameters

Biological Parameters:

- Microbial Contamination
- Total viable count
- Aflatoxin content.
- Pharmacological parameters
- Toxicology Parameters

Rainfall
Temperature
Soil
Altitude
Climate
Humidity
Length of storage

Drying is the removal of sufficient moisture content from crude drug so as to improve its quality and make it resistant to the growth of microorganisms.

Substitution

Contamination

True or False

Substitution

Quality - means 5th low or 5th of low quality. Substandard.

High moisture content leads to the Spoilage due to deterioration and micro

- A.
- B.
- C.
- D.
- E.
- F.
- G.
- H.
- I.
- J.

2. Study the table below and answer the questions that follow.

Capacity Use duration test

Disinfectant	Dilution	Growth of test organism in subculture after exposure for:			
Test Disinfectant		2.5 mins	5 mins	7.5 mins	10 mins
	1:400	NG	NG	NG	NG
	1:500	G	NG	NG	NG
	1:600	G	G	NG	NG
	1:700	G	G	G	NG
	1:800	G	G	G	G
Phenol	1:95	G	NG	NG	NG
	1:100	G	G	NG	NG
	1:105	G	G	G	NG
	1:110	G	G	G	NG
	1:115	G	G	G	G

- i. Calculate the phenol coefficient of the test disinfectant after 7.5 minutes.
- ii. What does your answer indicate?

3. Study the table below and answer the questions that follows.

In-use test

Concentration of test disinfectant	Inoculum count	Challenge number			Result
		1	2	3	
1.0	2×10^9	+++++	+++++	+++++	
1.5	2×10^9	----+	+++++	+++++	
2.0	2×10^9	----+	---++	+++++	
2.5	2×10^9	-----	-----	----+	

- i. Write the result for each of the concentration using either Pass/fail.
- ii. What is the name of the test represented with the table above?



DEPARTMENT OF PHARMACEUTICS AND PHARMACEUTICAL TECHNOLOGY
COLLEGE OF PHARMACY

300 LEVEL PHARM D. FIRST SEMESTER EXAMINATION 2021/2022 SESSION

COURSE: PCT 301 (PHYSICAL PHARMACEUTICS I)

DATE: Monday 7th February, 2022.

TIME: 9.00am – 12noon

SECTION A

INSTRUCTIONS: Answer all questions.

1. a. List all possible interfacial boundaries that will exist between two immiscible liquid mixtures.
b. What is the difference between adhesive and cohesive force?
c. Explain why surface tension is greater than interfacial tensions.
2. a. Mention the bases of the Ostwald classification of Colloids and identify the resultant classes.
b. List five kinetic properties of Colloids.
c. Explain the concept of solubilisation.

SECTION B

INSTRUCTIONS: Answer any four (4) questions only.

1. a. Distinguish Colloidal dispersions from other dispersions in the disperse systems.
b. Enumerate the methods you would employ in preparation of lyophobic sols.
c. List six colloidal drug delivery systems you know.
2. a. Itemize with examples the pharmaceutical applications of Colloids.
b. Identify three possible instabilities of colloidal dispersions and suggest two possible ways to counteract these instabilities.
3. Discuss the application of surface active agents in pharmaceuticals.
4. Explain the implications of stronger adhesive forces of attraction compared with cohesive forces.
5. Tabulate the differences between physical adsorption and chemisorption.



DEPARTMENT OF PHARMACEUTICAL AND MEDICINAL CHEMISTRY
COLLEGE OF PHARMACY,
AFE BABALOLA UNIVERSITY

2021/2022 Session
First Semester Examination
PCH 301

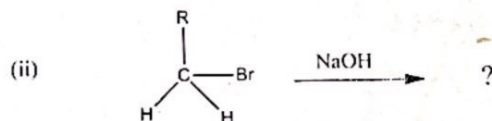
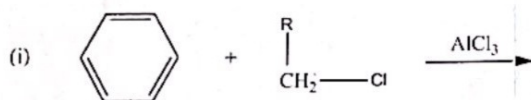
TIME ALLOWED: 3 Hours

31st JANUARY, 2022

ANSWER QUESTION 1 AND ANY THREE (3) OTHER QUESTIONS.

NOTE: Question 1 is compulsory.

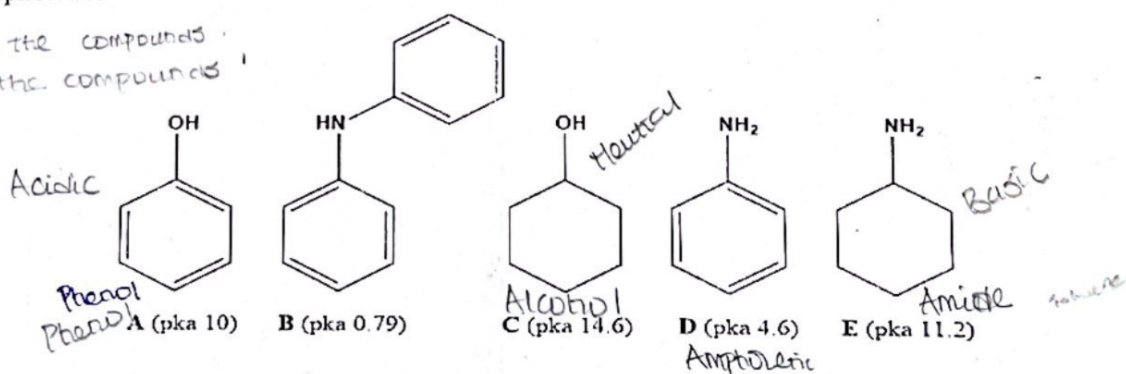
1. (a) Predict the products in the following reactions and suggest plausible mechanism for each case



(b) Phenobarbital, a weakly acidic drug with pK_a 7.4, is a barbiturate used as hypnotic and an anticonvulsant. What percentage of an orally administered dose of phenobarbital will exist in neutral (i.e. unionized) form in the:

- (i) plasma ($pH=7.4$)
(ii) stomach ($pH=1.4$)

2. Use the chemical structures of the following five compounds to explain why each compound has the indicated pK_a value. AND unambiguously identify each compound as acidic, basic, neutral or amphoteric:



3. (a) Starting with an appropriate alkyl halide and using any other needed reagent, outline the synthesis of 1-propanol. Explain the reaction mechanism.
(b) Explain the terms S_N1 and S_N2 in connection with the mechanism of the hydrolysis of primary, secondary and tertiary alkyl halides.



**AFE
BABALOLA
UNIVERSITY
ADO-EKITI (ABUAD)**

KM. 8.5 AFE BABALOLA WAY,
ADO-EKITI, EKITI STATE, NIGERIA.
P.M.B 5154 ADO-EKITI.

COLLEGE OF PHARMACY

DEPARTMENT OF PHARMACEUTICAL MICROBIOLOGY

COURSE TITLE: PRINCIPLES OF STERILIZATION AND ASEPSIS

COURSE CODE: PMB 301

FIRST SEMESTER EXAMINATION FOR 2021/2022 SESSION

Date: 28/01/2022

Time: 30 Mins

SECTION A: MULTIPLE CHOICE QUESTIONS

Instruction: Answer all questions in this section by circling the correct answer for each of the question, write True or False where it is necessary and fill in the correct answer for the gap.

1. The process which removes visible contamination and a prerequisite for effective disinfection or sterilization is
 - a. Asepsis
 - b. Cleaning
 - c. Antiseptic
 - d. Sterility
2. The process which reduces the number of viable microorganisms to an acceptable level but may not inactive some viruses and bacterial spores is termed
 - a. Sterilization
 - ☒ b. Disinfectant
 - c. Decontamination
 - d. Sanitizing
3. The process that reduces microbial population on object to a safe level
 - a. Sterilization
 - b. Disinfectant
 - c. Decontamination
 - d. Sanitizing
4. The process that removes pathogenic microorganisms from an object to make it safe to handle
 - ☒ a. Sterilization
 - b. Disinfectant
 - c. Decontamination
 - d. Sanitizing
5. Which of the following statement is true of the objective of Presterilization cleaning?

- a. Removal of the organic matters, blood and saliva which provide protective barrier for microorganisms and prevents its destruction
 - b. The destruction or removal of all microorganisms from article, surface or medium, including spores
 - c. None of the above
 - d. All of the above
6. Classification of the physical method of sterilization//disinfectant include the following except
- a. Irradiation
 - b. Filtration
 - c. Dyes
 - d. Gas
7. Autoclaves, or steam sterilizers essentially consist of the following except:
- a. A non-cylindrical or octahedral chamber, with capacities ranging from 400 to 800 mililiters.
 - b. Water heating system or steam generating system
 - c. Steam outlet and inlet valves
 - d. Thermometer or temperature gauge
8. Which of the following is not peculiar to pharmaceutical microbiology?
- a. Sterilization
 - b. Asepsis
 - c. Antimicrobials
 - d. Hygiene

Answer True or False

9. Mechanical washing uses the principle of conversion of electrical energy into vibratory sound waves which pass through a soap solution containing the instrument
10. Ultrasound cleaning uses the principle of high-pressure jets of water with or without a detergent which removes debris from instrument.
11. In pasteurization, the temperature employed is either 63°C for 30mins or 72°C for 15-20 seconds followed by cooling quickly to 13°C .
12. In Chemical Indicator of sterilization control of the moist heat, an alloy is designed to melt only after being subjected to relevant holding time.
13. If the bioburden is high, long exposure times or higher concentrations of antimicrobial may not be required.
14. Many materials such as fabrics, rubber, plastics can adsorb certain disinfectants, e.g. quaternary ammonium compounds.

Fill in the gap

15. In sterilization process the different types of filter use in Filtration include Candle
16. Membrane
17. Absorbent
18. Sintered glass
19. The two types of non-ionizing Radiation used for sterilization are Infrared
and
20. Ultraviolet
21. All drug preparations must be sterile.
a. True ✓
b. False
c. Not sure
d. Don't know
22. All drugs administered parenterally must be sterile.
a. True ✓
b. False
c. Not sure
d. Don't know
23. All drugs to be administered into internal organs must be supplied sterile.
a. True ✓
b. False
c. Not sure
d. Don't know
24. Body fluids are excellent media for microbial growth.
a. True ✓
b. False
c. Not sure
d. Don't know
25. Sterile preparations are..... of/from living microorganisms.
a. full
b. free ✓
c. contained
d. made
26. Injections are packaged inside.....
a. bottle
b. container

- c. vial ✓
d. cylinder
27. Injections are administered with the aid of.....
a. vials
b. ampoule
c. needle and syringe ✓
d. ligature
28. Preparations administered into the eyes are.....
a. injectable solutions
b. irrigation fluids
c. ophthalmic solutions ✓
d. dialysis solutions ✓
29.are used in poisoning of renal failure to remove accumulated waste or toxic products
a. injectable solutions
b. irrigation fluids
c. ophthalmic solutions
d. dialysis solutions ✓
30. Strands used to tie off wounds in surgery are.....
a. suture
b. ligatures ✓
c. implants
d. surgical dressings
31. Strands used to stitch wounds in surgery are
a. suture
b. ligatures
c. surgical cotton wool
d. surgical dressings
32. Paratonic solutions can cause discomfort when administered to the eye.
a. True
b. False
c. Not sure
d. Don't know
33. Intravenous administration of solution can cause haemolysis.
a. isotonic
b. hypertonic
c. hypotonic
d. mesotonic
34. Intravenous administration of solution can cause crenulation.
a. isotonic
b. hypertonic ✓
c. hypotonic
d. mesotonic
35. solutions can be used in sclerosis.
a. isotonic
✓b. hypertonic
c. hypotonic
d. mesotonic
36. What is the dissociation factor of potassium chloride, having 60% dissociation in water?

Candle

Asbestos

Sintered glass
membrane

- a. 2.6
- b. 1.6 ✓
- c. 1.8
- d. 2.2

37. Calculate the dissociation factor of magnesium sulphate, having 80% dissociation in water?

- a. 1.6
- b. 1.7
- c. 1.8 ✓
- d. 2.2

38. What is the dissociation factor of sodium chloride, having 60% dissociation in water?

- a. 2.6
- b. 1.6 ✓
- c. 1.8
- d. 2.2

NaCl

39. What is the dissociation factor of sodium carbonate, having 60% dissociation in water?

- a. 1.0
- b. 2.0
- c. 2.1
- d. 2.2 ✓

$\frac{220}{100}$ 2.2

40. In adjusting isotonicity of solution, calculations may be based one of the these:

- a. Freezing Point Depression
- b. Boiling Point Lowering
- c. Evaporation
- d. Boiling Point Depression

SECTION B: THEORY QUESTIONS (20 marks each)**TIME: 2 HRS****Instruction:** Answer four questions in all, two questions from each part.**Part A**

1(a). What is Microbial death? Support your answer with graphical illustration.
 1(b). The intended application of an antimicrobial agent, whether for preservation, antisepsis or disinfection, will influence its selection and also affect its performance, **Discuss**.

2(a). Mention 7 antimicrobial agents/disinfectants and give a detail explanation of any 3 you understood.
 2(b). Briefly explain 3 mode of action of antimicrobial agent
 2(c). Enumerate 5 factors affecting choice of antimicrobial agent

3(a). What is Microbiological challenge

3(b). Describe the detailed Microbiological challenge of Vegetative bacteria, support your answer with appropriate examples. → *Listeria monocytogenes*, *Pseudomonas aeruginosa*

Part B

1(a). List and explain any five classes of sterile preparations.
 1(b). List and explain all the types of injections based on volume of injection.

2(b). The danger posed by injecting paratonic solutions depends on the route of administration and volume of injection. Explain in detail, the consequences of injecting paratonic solution through the following routes:

- 1 a. Intravenous route
- 2 b. Intrathecal route
- 5 c. Intramuscular route
- 4 d. Intradermal route
- 3 e. Ophthalmic route

3(a). Define Sodium Chloride Equivalent.

3(b). Find the quantity of sodium chloride to be used in compounding the following prescription. The values of sodium chloride equivalent of glycerin and scopolamine hydrobromide are 0.34 and 0.12 respectively.

Rx

Glycerin 1%

Scopolamine HBr 0.5%

Sodium chloride q.s

Purified water ad 60.0

Make isotonic solution.

3(c). Find the quantity of boric acid (in grams) to be used in compounding the following prescription:

Rx

Atropine sulphate 0.5%

Boric acid q.s 52

Purified water ad 30.0

Make Isotonic Solution

Sodium Chloride equivalent

Boric acid 0.52

- 2(b) mode of action
- Toxicity of agent
 - Intended application
 - Microbial challenge
 - Environmental factors

2b) - Proteins: Some proteins are denatured enzymes which are found in the active site become inactive

- Hydrolysis: Radiation of some chemicals may damage the DNA

- Oxidation: This causes formation of dimers between two thymine bases.



INSTRUCTIONS: Answer three (3) questions in all

TIME ALLOWED: 1 hr

SECTION A [COMPULSORY]

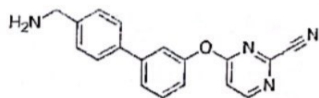
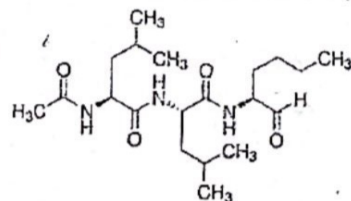
Eosinophilic esophagitis (EoE) is a chronic inflammatory disorder associated with allergic hypersensitivity to food. In the study below, Kottyan et al. interrogated >1.5 million genetic variants in EoE cases of European ancestry and control subjects. The plot below is the result of that study.

Q1: What is the name of this type of study (0.5 mk)?

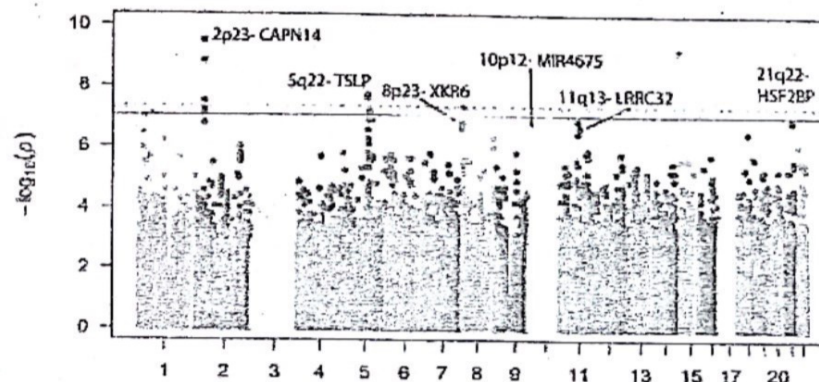
Q2: What is the name of this plot (0.5 mk)?

Q3: What is the name of the X-axis of this plot (1 mk)?

Q4: Identify the most plausible drug target for EoE from the graph and identify the chromosome where the gene can be found (1 mk)



iii
mepolizumab
(monoclonal antibody against
IL-5)



Q5: CAPN14 and its gene product CAPN14 is an important member of the calpain family; they are intracellular, calcium-dependent cysteine proteases and its emerging role in patients with EoE. As a cysteine protease, name the three amino acids you would expect in the active site of this enzyme and by what name are these amino acid groups called (1 mks)?

Q6: The compounds above are both CAPN14 inhibitors with experimentally demonstrable activities in EoE, which of these two compounds is a reversible inhibitor (1 mk)?

Q7: Which is the irreversible inhibitor (1 mk)?

Q8: What is the general name given to head group of such irreversible inhibitors (1 mk)?

Q9: Comment on the chemistry underlying the reaction between the head group and the active site amino acids (1 mk)

Q10: Justify the answers in Q7 and Q8 above (1 mk)

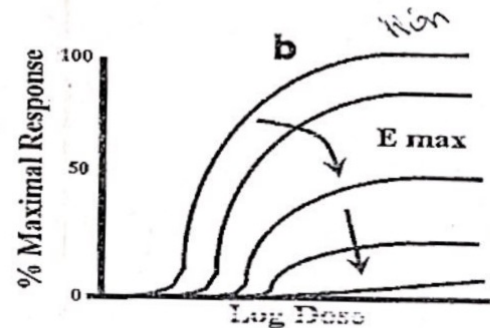
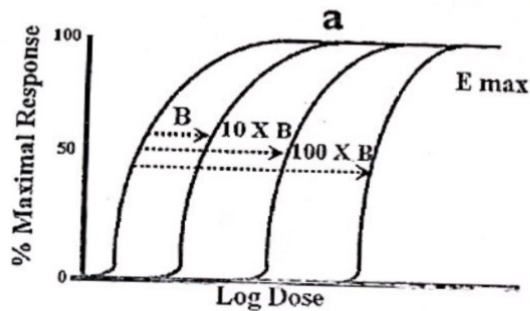
Q11: Since CAPN14 is a cytosolic calcium-activated cysteine protease, comment on (a) class of drug target CAPN14 is, (b) the most appropriate route of administration for all the drugs (i-iii) above that allows efficient tissue distribution and cellular uptake, based on their physicochemical properties (5 mk)

Q12: List out other types of drug target there is based on cellular location (3 mks)

Q13: Calpain activity assay protocol is based on the detection of cleavage of calpain substrate Ac-LLY-AFC. Ac-LLY-AFC emits blue light ($\lambda_{max} = 400$ nm); upon cleavage of the substrate by calpain, free AFC emits a yellow-green fluorescence ($\lambda_{max} = 505$ nm), which can be quantified using a fluorometer or a fluorescence plate reader. Draw a hypothetical graph that shows inhibition of Calpain-14 in the presence of compounds "i" and "ii" above in comparison to a vehicle control (3 mks)

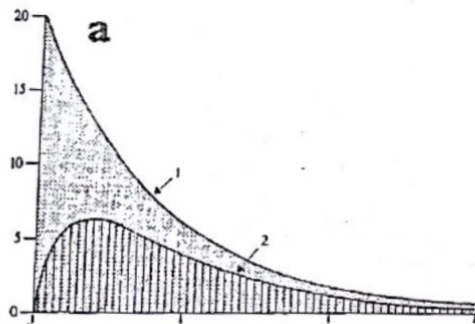
SECTION B [ANSWER ONLY ONE QUESTION FROM THIS SECTION]

1



- ai. Identify and name graphs a & b above (2 mk)
 - ii. In a tabular form, give at least 3 difference between graphs a & b above (5 mk)
 - iii. Give at least one example each of drugs that belong to graphs a & b above. (2 mk)
- b. List at least 5 factors affecting drug absorption (6 mk)

2



- ai. If the y-axis represents plasma concentration (mcg/ml) and x-axis represents time (h) on the graph, identify a pharmacokinetic parameter that can be gotten from the graph (3 mk)
 - ii. Name the routes of administration represented by 1 & 2 in the graph (2 mk) *IV & Oral*
 - iii. List 4 factors affecting the identified pharmacokinetic parameter (3 mk)
- b. Briefly explain 3 parameters that can be gotten from the all or none dose response curve (6 mk)

SECTION C [ANSWER ONLY ONE QUESTION FROM THIS SECTION]

- 1a. Describe in details forensic toxicology (10 mk)
 - b. Explain in details factors affecting the effects of poisons (5 mk)
- 2a. Enumerate the classification of poisons (5 mk)
- b. Describe the factors affecting the delivery of poison (10 mk)



**AFE
BABALOLA
UNIVERSITY**
ADO-EKITI (ABUAD)
KMA & AFE BABALOLA WAY, ADO-EKITI, EKITI
STATE, NIGERIA
P.M.B. 6464, ADO-EKITI

19/11/2021

COLLEGE OF PHARMACY
Department of Clinical Pharmacy & Public Health

First Semester Examination 2021/2022 Academic Session

Course: SAP301: Pharmacy Administration

Exam date: Thur 10/02/22 9.00am – 12.00noon

SECTION B (ESSAY – Attempt any FOUR questions)

1. You have been contacted by a firm with limited funds who wishes to partner with you in establishing a pharmacy enterprise around your locality in Nigeria.
 - a) Outline the sources of viable funding you will recommend and the limitations of each?
 - b) Highlight in tabular form, the factors you would consider in choosing between building a pharmacy from scratch or buying an already existing pharmacy [11 marks, ENO]
2. (a) List the operational principles of good drug procurement
 (b) List and explain the drug procurement methods that can be used to aid the procurement process
 (c) Highlight 5 challenges that can hinder the procurement process? [11 marks, ENO]
3. Consultants are hired to share their expertise and knowledge to help businesses attain goals and solve problems.
 - (a) Outline six (6) qualities of a good consultant
 - (b) List six (6) areas where a pharmacist be a consultant
 - (c) If you were appointed a consultant by a private company, outline all possible ways to determine the consulting rate [11 marks] [POE]
4. (a) Define marketing communication.
 (b) Outline the importance of (marketing communication)
 (c) Outline the characteristics of excellent marketing skills [11 marks] [EOO]
5. (a) Define entrepreneurship development
 (b) Outline the steps in conducting market survey
 (c) Outline 7 steps in selecting a business location [11 marks] [EOO]
6. Outline the stepwise procedure to start a new pharmacy practice [11 marks] [EOO]

Altitude - ↑ Coffee, Cocoa - thick forest, south Nigeria
 Humidity - ↑ = thick forest, south Nigeria
 Soil & Soil fertility (Eudypnia factor)
 fertilizers - Poor soil needs fertilizers
 Pests & Pests control - ↑ = greater cost to do
 Pests control.



**AFE
BABALOLA
UNIVERSITY**
ADO-EKITI (ABUAD)
514 S. AFE BABALOLA AVENUE, ADO-EKITI, EKITI STATE, NIGERIA
 P.M.B. 5050, ADO-EKITI

**DEPARTMENT OF PHARMACOGNOSY
COLLEGE OF PHARMACY**

FIRST SEMESTER (PHARM.D) EXAMINATION 2021/2022 SESSION

COURSE: PCG 301

Level: 300

Date: 2nd February 2022

Time Allowed: 3 hours (9:00- 12:00AM)

INSTRUCTIONS:

1. Answer ALL questions in Section A and any three (3) in Section B
2. Answer all the questions in your answer booklet
3. Write your Matriculation number in the space provided in your answer booklet

SECTION A

1. Cultivation ensures quality and purity of medicinal plants. **True/False**
2. Show how altitude and rainfall affect cultivation
3. Name the two methods of propagation of medicinal plants. *Propagation of seeds, Propagation by vegetative means*
4. In sexual propagation, seedling is comparatively cheaper and easy to raise. **True/False**
5. Resins are *Amorphous*.....or *Semi*..... solid
6. Tolu balsam is a balsam obtained from *Tolucifera balsamum* family. *Leg. Legumes*
7. The major component of the oil of citrus fruit peels is. *α-Limonene* *cleavage*
8. The instrument used in extraction of Volatile oils is called. *Clevenger apparatus*
9. Enzymes obtained from plants are called. *Phyto enzymes (Pepsin, Rennin)*
10. Enzymes derived from animals are known as. *Pancreatic enzymes*
11. Drug Evaluation is the determination of identity, purity and quality. **True/False**
12. Examples of cell features searched for under the microscopes are *Telochomes*.....and *fragmented epidermal cells*.
13. What is the full meaning of VIN and VTN?
14. Substituting real ginger powder with exhausted ginger is a type of unintentional adulteration. **True/False**
15. *Pure honey*..... is the major substitute for original honey in adulteration
16. The toxic part of *Abrus precatorius* is. *seed* *Seed*.....
17. All parts of *Nicotiana tabacum* are poisonous. **True/False**
18. The inherent toxicants found in plants are secondary metabolites. **True/False**
19. Plants produce toxicants as part of their self defence system against pathogens and stresses. **True/False**
20. Toxins of *Abrus precatorius* are released when seeds are chewed and swallowed. **True/False**
21. Cannabis refers to a group of *Three*..... plants with *Psychoactive*..... properties.

Nut - Vincetoxine & Vincloctoxine

VCS - Vincetoxine

Psychoactive Cannabis sativa
 Cannabis indica
 Cannabis ruderalis

Admission
Detection
Duplication
Misdirection

22. Tetrahydrocannabinol (THC) is not the main psychoactive compound in cannabis which is responsible for the "high" that most people associate with cannabis. True/False
23. In general, formation is enhanced at higher temperatures, though excess physical loss of oil occurs on ^{high temperatures}
24. The sugar cane is a lowland plant while the coconut palm needs a maritime climate. True/False
25. Seeds must be collected when perfectly ripe to achieve success and should not normally be stored in a cool, dry place and kiln-dried if not planted immediately. True/False
26. Barks are usually collected after a period of, because they separate most readily from the
(a) damp weather; stem (b) dry weather, bark (c) damp weather; wood (d) wet weather; tree
27. For collection of gums, gum resins etc. dry weather is indicated and care should be taken to exclude vegetable debris. True/False
28. can be used for drying in the case of nutmegs. (a) Hot fires (b) Oven fires (c) Closed fires (d) Open fires
29. Drugs stored in the usual containers such as sacks, wooden cases, bales, cardboard boxes and paper bags reabsorb about to of moisture.
(a) 8-10% (b) 10-12% (c) 5-12% (d) 7-10%
30. Instrumental analyses are used to analyse the of phytoconstituents.
(a) Physical groups (b) Biological groups (c) Chemical groups (d) Microbiological groups

open shed
Mistral
on lipin's Tray
vacuum
spring

SECTION B

1. Compare and contrast cultivation collection and wild collection of drugs &
2. Describe in some details the enzymes obtained from plants

3.

- a. Define Crude Drug Evaluation
b. List the different methods of Evaluation
c. Describe the Chemical tests for Volatile Oils
d. Mention four methods of adulteration

(i) A thin sheet of drug sample is used without action with alcoholic solution to Sudan III to give a red color.
(ii) A thin sheet of drug sample is used in reaction with a solution of turkani to give a red colour.

microscopic
physical
biological
chemical

4.

- a. Outline methods used for propagation by vegetative means
b. State the core purposes of surgical dressing

biological
physical
microscopic
chemical

Leguminosae
Leguminosae
Leguminosae
Leguminosae
Leguminosae

Leguminosae

mylase
CS

10). Certain plants e.g. *Aithaea* *officinalis* that produce mucilage as a water-retaining material contain less mucilage when grown on soil with Moisture content

11). Soils containing much humus and little lime are inclined to become Active, while those with abundant lime are Alkaline.

12). An example of research involving grafting is where *Cinchona ledgeriana* Scions are grafted on *Cinchona succirubra* Root Stocks resulting in a tree that produces bark rich the alkaloid, Quinidine.

13). The season each drug is collected is of considerable importance because the Quantities and sometimes the Nature of the Active Constituents is not constant throughout the year.

14). Drying process varies in duration from few hours to many weeks and in case of open-air.

15). Leaves and other delicate structures when Over dried become very brittle and tend to break in the course of transportation.

16). Evaluation of a drug ensures the Identity of a drug and determines the Quality and Purity of drugs.

17). Fibres may be defined as any hair-like raw material directly obtainable from an Animal, Vegetable or Mineral source.

18). Nature abounds in fibrous materials, especially Cellulose types such as cotton, wood, grains, and straw, Only a small number can be used for textile products or other industrial purposes.

19). Chemically, all vegetable fibres consist mainly of Cellulose, although they also contain varying amounts of substances as Hemicellulose, Lignin, Pectins and waxes that must be removed or reduced by processing.

20). Dressings are compulsorily needed for Proper management and subsequent Healing of wounds caused by injuries, burns, microbial infections and surgical operations.



**AFE
BABALOLA
UNIVERSITY**
ADO-EKITI (ABUAD)
KM 13 AFE BABALOLA WAY, ADO-EKITI, EKITI
STATE, NIGERIA
F.M.B. 111, ADO-EKITI

COLLEGE OF PHARMACY

Department of Clinical Pharmacy & Public Health

First Semester Examination 2021/2022 Academic Session

Course: PCL301: Biopharmaceutics and pharmacokinetics Exam date: Mon 14/02/22 2.00 – 5.00pm

SECTION B (ESSAY – Attempt any FOUR questions)

- List 5 physiological and 5 physicochemical factors that affects drug absorption [5 marks]
 - Explain (with relevant examples) how each of any 3 physicochemical factors listed above affects drug absorption [6 marks] {ENO}
- Explain the following:

 - Continuous increase in the plasma concentration of amoxycillin, in the first 25 mins, following oral administration and subsequent continuous decline in the concentration [3 marks]
 - Toxicity of a drugs with a half-life of 20 hr administered four times a day [3 marks]
 - Toxicity of a drug in a patient whose creatinine clearance decline by 75% [2 marks]
 - Why the plasma concentration profile of amoxycillin 500mg and 2000mg remained relatively similar following oral administration of the drug [3 marks]. {POE}
- Differentiate between active transport and passive diffusion [5 marks]
 - Outline the characteristics of facilitated diffusion [6 marks] {POE}
- Outline how you will determine the following parameters?

 - Absolute and Relative bioavailability of solid dosage formulation for oral administration [5 marks].
 - Biocquivalence of a new solid dosage formulation for oral administration with a similar innovator drug formulation [6 marks]. {POE}
- Define bioavailability of a drug. [2 marks].
 - Give three reasons why bioequivalence studies are required for a new solid dosage form before it is registered by the regulatory body [3 marks].
 - The bioavailability of a drug whose volume of distribution (V_d) is 40 litres and half-life is 14 hr is 70%. If 300mg is administered orally at a dosing interval of 18 hr, calculate the steady-state plasma concentration (C_{ss}) for the drug $\{C_{ss} = F \cdot (D/t)/(k_{el} \cdot V_d)$ where F is the fraction of the drug absorbed, D is the dose administered, t is the dosing interval and V_d is the apparent volume of distribution}. [6 marks]. {POE}
- Consider the following values obtained after the oral administration of 300mg of phenytoin tablet.

Time (hr)	1	2	5	10	15	20	30	40	50
C_p (mg/L)	0.6	2.0	4	4.10	3.6	3.3	2.1	1.2	0.70

 - Calculate the AUC_{0-15hr} and AUC_{0-50hr} [6 marks].
 - Given that the elimination rate constant (k_e) for the phenytoin is -0.048/hr and half-life ($t_{1/2}$) is 0.693/ k_e , calculate the $t_{1/2}$ of the drug [5 marks]. {POE}

PCT 316: Dispensing Practical IV
2022/2023 Session (Second Semester)

TEST

Wednesday May 17, 2022

Time Allowed: 1 Hr 30 Mins

REG. NO.:

2

Answer ALL Questions in Sections A and B
GROUP A

SECTION A

INSTRUCTIONS¹: The preparation of the products is required in Section A. The attention of the Examiner must be drawn to any **unusual doses** and **irregular labels**. All quantities used and dispensed and all calculations must be clearly shown. **The method of preparation should only be given where required.**

1. Rx

Prepare 20 g of Methyl Salicylate Ointment PC_x 1979.

Label: Apply to the inflamed skin area twice daily.

*State the method of preparation

2. Rx

Triethanolamine	0.25 g
Glicic acid	1.0 g
Benzyl Benzoate	12.5 ml
Water	12.5 ml
Water to	100%

Prepare 40 ml for Mrs. Danladi Usman and Label Appropriately.

SECTION B

INSTRUCTIONS: Preparation of the products is not required in this section. However, you are required to show your calculations ONLY.

3 a) Rx

Fluconazole tabs 100mg

Disp. _____ tabs

Sig: tab ii stat, then 3mg/kg b.i.d. × 7 d thereafter

Calculate the number of tablets to dispense to a patient weighing 147 lb.

b) Rx

George Ighodalo Age: 4 years

Weight: 52.8 pounds

Erythromycin Ethyl Succinate (EES) 200mg/5ml

Disp. 300ml

Sig: _____ ml qid until gone

i) If the dose of EES is 50mg/kg/day, how many milliliters would provide each dose?

ii) How many days would the prescription last the patient?

0.1g — 10ml
2 — 100

SECTION B: Answer ANY TWO (2) Questions (20 MARKS EACH)

1. You are given a conical flask containing 2000 mLs of water collected from ABUAD borehole, prepare and send 90 ml of bacteriostatic water for injection.
2. You are provided with phenyl mercuric nitrate 0.02% as bactericide, a glass eye drop bottle and a sintered glass filter No 4. Send 10 ml of 0.25% w/v zinc sulphate eye drop B.P.C.
3. You are provided with 50g of anhydrous dextrose, 9g of sodium chloride and 1000 mLs of freshly distilled water, prepare and send 250 mLs of intravenous dextrose saline infusion 0.9%w/v

7
50g ——— 250ml
2 ——— 100



AFE BABALOLA
UNIVERSITY
ADO-EKITI (ABUAD)
KALU, AFE BABALOLA ROAD, ADO-EKITI, NIGERIA.
ESTD 1984

COLLEGE OF PHARMACY

24th November, 2022

DEPARTMENT OF PHARMACOGNOSY AND NATURAL PRODUCTS

MID-SEMESTER TEST 2022/2023 SESSION

COURSE CODE: PCG 301

TIME ALLOWED: 60MINS

COURSE TITLE: PHARMACOGNOSY I

Instruction: Answer ALL Questions in Sections A and B.

Section A

1. Medicinal plants can be collected from wild and Cultivated Sources.
2. Cultivation ensures quality and purity of medicinal plants..... True or False
3. Cultivation ensures irregular supply of crude drugs..... True or False
4. Name the two methods of propagation of medicinal plants Seeds & vegetative.
5. Gibberellic acid promotes the germination of dormant seeds..... True or False
6. What enzymes are indicated in the treatment of pancreatitis.....?
7. As a Pharmacist, what enzyme medication would you recommend for dyspepsia?
8. What is an autocatalytic enzyme? Give an example
9. Give two reasons why we rely on microorganisms for the production of enzymes in modern Pharmacognosy
10. Pancreatic amylase is a β -amylase, True or False
11. Resins are Amorphous solid or semi solid substances that are Water insoluble but mostly soluble in alcohol..... (a) amorphous, alcohol, water (b) non amorphous, alcohol, water (c) non amorphous, water, alcohol (d) amorphous, water, alcohol
12. are found to be hard, translucent or transparent and fusible.
(a) Chemically, resins (b) Physically, oleoresins (c) Physically, resins (d) Chemically, oleoresins
13. Oleoresins are semi-solid extracts composed of resin and obtained by evaporation of the solvents used for their production. (a) Olive oil (b) Corn oil (c) Vegetable oil (d) essential or fatty oil
14. are prepared from e.g. ginger, basil, nut meg, thyme, balsam, Indian bay leaves etc. (a) Oleoresins, spices (b) Resins, exudates (c) Oleoresins, exudates (d) Resins, spices
15. causes the body to make substances that fight pain and swelling.
(a) Bromelain (b) Malt extract (c) Papain (d) Oleoresin
16. Volatile oil is used to standardize drugs which the efficiency is due to odourous principles
17. The apparatus used for volatile oil content determination is Clevenger's Apparatus

CLEVENGER'S APPARATUS

Volatiles are gotten from plants, animals, microorganism which are beneficial in pharmaceutical industry.

Clevenger's



**AFE
BABALOLA
UNIVERSITY
ADO-EKITI (ABUAD)**

KM. 8.5, AFE BABALOLA WAY,
ADO-EKITI, EKITI STATE, NIGERIA.
P.M.B 5454 ADO-EKITI.

COLLEGE OF PHARMACY

PHARMACEUTICAL MICROBIOLOGY DEPARTMENT

COURSE TITLE: PRINCIPLE OF STERILIZATION AND ASEPSIS

COURSE CODE: PMB 201

21st January, 2022

Continuous Assessment

ANSWER ALL

Time: 40 minutes

1. To achieve sterilization of Instrument, Theatre and Pharmaceutical Laboratory, **three definite stages** are very essential to be completed. **Discuss**



**AFE
BABALOLA
UNIVERSITY
ADO-EKITI (ABUAD)**

KM 8.5 AFE BABALOLA WAY, ADO-EKITI, EKITI STATE, NIGERIA
P.M.B. 5454, ADO-EKITI

**COLLEGE OF PHARMACY
DEPARTMENT OF PHARMACEUTICAL MICROBIOLOGY AND
BIOTECHNOLOGY**

300L FIRST SEMESTER (2021/2022) TEST

Answer All 30 Minutes

1. Define Isotonic Solution
2. Explain the consequences of intravenous administration of paratonic solutions.
3. Write short note on:
i. irrigation fluids ii. implants iii. absorbable haemostatics



COLLEGE OF PHARMACY
DEPARTMENT OF PHARMACEUTICAL MICROBIOLOGY AND
BIOTECHNOLOGY

300L FIRST SEMESTER (2021/2022) TEST

Answer All 30 Minutes

1. Define Isotonic Solution
2. Explain the consequences of intravenous administration of paratonic solutions.
3. Write short note on:
i. irrigation fluids ii. implants iii. absorbable haemostatics ^{materials to stop blood loss during surgery}

solutions that possess similar salt levels as the body cells & blood

DEPARTMENT OF PHARMACEUTICAL AND MEDICINAL CHEMISTRY
COLLEGE OF PHARMACY

PCH 301 In-course Assessment Test
Instructions: Answer ALL questions

Time: 1 hour

1. Starting with an appropriate alkyl halide and using any other needed reagent, outline synthesis of 1-propanol. Explain the reaction mechanism.
2. Explain the following:
(a) Free radicals
(b) Electrophilic and nucleophilic reagents
(c) Homolytic and heterolytic fission of covalent bond.
3. Explain the mechanism of substitution reaction of chlorine on methane.

