East Point College of Pharmacy

East Point Campus, Jnana Prabha, Virgo Nagar Post
Bengaluru – 560049, Karnataka

Approved
by
Pharmacy Council of India, New Delhi

Affiliated
to
Rajiv Gandhi University of Health Sciences
Karnataka
Bengaluru – 560 041
India

LAB MANUAL

HOSPITAL PHARMACY
PHARM D
4th Year

EAST POINT COLLEGE OF PHARMACY
East Point Campus, Jnana Prabha, Virgo Nagar Post,
Bengaluru – 560049, Karnataka

PROGRAM SPECIFIC OUTCOMES	
DOCTOR OF PHARMACY	
PSO1	Acquire a thorough foundational knowledge in pharmaceutical sciences, including pharmacology, pharmaceutics, pharmaceutical chemistry, pharmacognosy and pharmaceutical analysis to excel in further academic pursuits
PSO2	Acquire and apply the pharmacotherapeutic concepts for better patient care enhancing employability across various sectors including clinical research organizations, academic and hospitals
PSO3	Equip with entrepreneurial skills and knowledge of pharmacoepidemiological studies and regulatory aspects to initiate and run successful ventures in the healthcare sector

Course:	**Code: 4.2P** **Hospital Pharmacy**
CO1	Students can able to execute professional responsibilities of hospital pharmacist and identify drug related problems
CO2	The professional practice management skills in hospital pharmacies
CO3	Provide professional services like patient counseling and technical inputs for parenteral nutritional support
CO4	The manufacturing practices of various information in hospital setup

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Syllabus

Practical: 3 Hrs./Week

1. Assessment of drug interactions in the given prescriptions

2. Manufacture of parenteral formulations, and powders.

3. Drug information queries.

4. Inventory control

List of Assignments:

1. Design and Management of Hospital pharmacy department for a 300 bedded hospital.

2. Pharmacy and Therapeutics committee – Organization, functions, and limitations.

3. Development of a hospital formulary for 300 bedded teaching hospital

4. Preparation of ABC analysis of drugs sold in one month from the pharmacy.

5. Different phases of clinical trials with elements to be evaluated.

6. Various sources of drug information and systematic approach to provide unbiased drug information.

7. Evaluation of prescriptions generated in hospital for drug interactions and find out the suitable management.

Special requirements:

1. Each college should sign MoU with a nearby local hospital having minimum 150 beds for providing necessary training to the students on hospital pharmacy activities.

2. Well equipped with various resources of drug information.

Scheme of Practical Examination:

	Sessional	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	**20**	**70**
Duration	**03hrs**	**04hrs**

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce, and record maintenance).

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EAST POINT COLLEGE OF PHARMACY
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Experiment No.:1

DRUG – DRUG INTERACTIONS

AIM: To study and report the identification of Drug-Drug interaction in the prescription.

Theory:

Prescription

A prescription is a written order from a registered physician, a dentist, a veterinarian a surgeon, or any other person licensed by law to prescribe drugs, containing instructions for preparation and dispensing to the pharmacist along with the mode of administration for the patient. Pharmacists may accept a prescription on the telephone in an emergency and it needs to be followed by a regular written prescription.

Drug-Drug Interaction

A drug interaction is a reaction between two (or more) drugs or between a drug and a food, beverage, or supplement. "The effects of drugs altered by another drug or food that is prior or concurrent administration with it" Then it is termed as Drug-Drug or Drug-food interaction. The mechanism of drug interaction comprises pharmacokinetics and pharmacodynamics which means what the body does to the drug and drug does to the body respectively. Kinetics includes drug absorption, distribution, metabolism, and elimination, whereas pharmacodynamics is the numerous actions of drugs on the body systems or their organs.

Conducting a thorough drug-drug interaction (DDI) check is a critical component of patient care. Here are the steps to perform a comprehensive drug-drug interaction analysis:

1. Obtain a Complete Medication List

Collect a comprehensive list of all medications the patient is currently taking, including prescription drugs, over-the-counter medications, herbal supplements, and vitamins. Confirm the accuracy of the list with the patient or their healthcare provider.

2. Identify Potential Interactions

Utilize reputable drug interaction databases and tools, such as Micromedex, Lexicomp, or clinical pharmacology databases. Enter each medication into the interaction checker to identify

potential interactions. Carefully review the interaction results, noting the severity, mechanism, and clinical significance of each interaction.

3. Assess Clinical Relevance

Assess the severity of the identified interactions (e.g., major, moderate, minor). Take into account patient-specific factors such as age, renal and hepatic function, comorbidities, and overall health status, which may influence the clinical relevance of the interaction. Prioritize interactions based on their potential impact on the patient's health and the likelihood of occurrence.

4. Develop a Management Plan

Weigh the risks and benefits of continuing, discontinuing, or modifying the medications involved in the interaction. Consider alternative medications that do not interact or have a lower risk of interaction. If necessary, adjust the dosages of the interacting medications to minimize the risk.

5. Communicate with Healthcare Providers

Share the findings and recommendations with the prescribing healthcare provider. Work together to determine the best course of action for managing the interaction. Record the details of the discussion and any agreed-upon changes in the patient's medical record.

6. Educate the Patient

Educate the patient about the potential interactions, including symptoms to watch for and the importance of adhering to the prescribed management plan. Provide written information or resources about the interactions and any new instructions. Encourage the patient to ask questions and express any concerns they may have.

7. Monitor and Follow-Up

Arrange for regular monitoring of the patient's condition and response to the modified medication regimen. Schedule follow-up appointments to reassess the patient and make any necessary adjustments. Continually review the patient's medication list for any new potential interactions as new medications are prescribed.

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DRUG-DRUG INTERACTION DOCUMENTATION FORM

PATIENT NAME:	**IP/OP NUMBER:**		**DOA:**
AGE(yrs):	**GENDER:**	**WARD:**	**DOD:**

MEDICAL HISTORY:

MEDICATION HISTORY:

SOCIAL HISTORY:

FAMILY HISTORY:

PREVIOUS ALLERGIES:

DIAGNOSIS:

LABORATORY INVESTIGATIONS	DATE	RESULT	SIGNIFICANCE	
			NORMAL	ABNORMAL

Sl. no	CURRENT DRUGS	DOSE	ROUTE	FREQUEN-CY	Days									
					1	2	3	4	5	6	7	8	9	10
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														

INDEX DRUG:	INTERACTING DRUG:

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SUMMARY OF INTERACTION:			
PROBABLE MECHANISM :			
SEVERITY:	**MAJOR ☐**	**MODERATE ☐**	**MINOR ☐**
ONSET:	**RAPID ☐**	**DELAYED ☐**	**UNSPECIFIED ☐**
SUBSTANTIATION:	**THEORITICAL ☐**	**PROBABLE ☐**	**ESTABLISHED ☐**
CLINICAL MANAGEMENT:			
REFERENCE:			
Doctors Name:		**Signature:**	
Feedback:			
Name:		**Signature:**	
Date:			

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Experiment No.:2

PREPARATION OF ASCORBIC ACID INJECTION

AIM: To prepare and submit 2 ampoules, each containing 2 ml of ascorbic acid injection IP.

Synonyms: Vitamin C injection, L-Ascorbic acid injection.

Formula: As per IP

Ingredients	Official Formula	Working Formula
Ascorbic Acid	25.00 g	
Sodium Bicarbonate	14.58 g	
p- chloro meta cresol	0.1 g	
Water for injection (q.s.)	100 ml	

Requirements: Beaker, Glass rod, Funnel, Filter paper, Ampoule.

Apparatus

Ampoules, 2 ml- 3

Maker, 250 ml- 1

Beaker, 100 ml- 1

Measuring cylinder, 50 ml- 1

A syringe with needle, 2 ml- 1

G-4 filter- 1

pH paper/pH meter- 1

Chemicals

Ascorbic acid

Sodium bicarbonate

p-chloro meta cresol

Water for injection

Theory

Ascorbic acid closely resembles monosaccharides in structure. It is a strong antioxidant (reducing agent). Ascorbic acid in solution is rapidly oxidized in air and alkaline media. L-ascorbic acid undergoes oxidation to form dehydro ascorbic acid and this reaction is reversible. Both ascorbic acid and dehydroascorbic acid are biologically active. On hydration,

dehydroascorbic acid is irreversibly converted to 2,3-diketo- gulonic acid, which is inactive. Ascorbic acid is freely soluble in water. Ascorbic acid solutions exhibit maximum stability at about pH 5.4. As it undergoes oxidation in acidic pH, sodium bicarbonate is added to adjust the pH to 5.7 (limit is 5.5 to 6.4).

Type: Monophasic liquid dosage form-solution.

Procedure

1. 2/3rd of the total volume of water is placed in a beaker.

2. Ascorbic acid is weighed and suspended in water with continuous stirring.

3. Sodium bicarbonate is slowly added with vigorous stirring. Effervescence is produced.

4. After subsiding the effervescence, the remaining sodium bicarbonate is added. This process is continued till ascorbic acid completely dissolves.

5. Para chloro meta cresol is added and stirred to dissolve.

6. The pH is adjusted to 5.7.

7. The solution is filtered through a G-4 filter.

Filling of ampoules: The syringe is rinsed with water for injection followed by rinsing with drug solution. The syringe is loaded with the drug solution. Air bubbles (if any) are removed. This can be achieved by tapping the syringe with a finger while holding it in a perfectly vertical position. (After expelling the air, at least one drop of drug solution should be expelled. After this adjustment, the volume indicates the desired quantity of liquid in ml.) Then the drug solution is transferred into the ampoules slowly by inserting the needle into the bottom of the container. Therefore, a needle larger than the length of the ampoule is necessary This prevents the rim (or neck) from contamination by drug solution and also prevents the charring of the solution.

Sealing of Ampoules can be sealed by two methods: pull sealing method and tip sealing method.

(a) Pull sealing method: Ampoules can be sealed by this method using a twin-jet burner. LPG (liquefied petroleum gas) cylinder and oxygen gas cylinder are connected to the burner. Oxygen gas increases the heat of fusion of flame making tip sealing easier and faster. Sealing can be

done by keeping the tip of the ampoule in the flame while holding the ampoule in the left hand. Grip the end of the ampoule with blunt-nosed forceps held in the right hand. The tip of the glass is allowed to melt. The tip of the ampoule is pulled out when the tip turns red (becomes soft). The tip is left in the flame for one or two seconds and removed. The tip should be smoothly and evenly rounded with a small flat glass in the center

(b) Tip sealing method: Ampoules can be sealed by this method using a Bunser burner connected to LPG cylinder. The ampoule is rotated almost horizontally (slight inclination) with about 1 cm of the neck in the non-luminous flame. The ampoule is slowly withdrawn from the flame when the tip starts bending. The ampoule should be appropriately rotated to correct the bending. The resulting seal is elegant and very strong. This method of sealing requires considerable practice to perfect.

The sealing of ampoules can be grossly checked by shaking the ampoules with the right hand against the palm of the left hand. Improperly sealed ampoules leak out the contents that can be felt. However, sealing can be perfectly determined using a leakage test.

Dose: Prophylactic dose 25 to 75 mg daily. There close-not less than 250 mg daily in divided

Storage: Store in a cool and dark place not exceeding a temperature of 25°C.

Auxiliary Label: Discard if any particulate matter is present.

Precaution: Since pressure may develop on long storage, precaution should be taken to wrap the container in a protective covering while it is being opened.

Route of Administration: Intramuscular route.

Date of Expiry: 2 years from the date of manufacture.

Report: Prepared and submitted 2 ampoules, each containing 2 ml of ascorbic acid injection IP.

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Experiment No.:3

PREPARATION OF CALCIUM GLUCONATE INJECTION

AIM: To prepare and submit 2 ampoules, each containing 10 ml of Calcium Gluconate injection IP.

Formula: As per IP

Ingredients	Official formula	Working Formula
Calcium Gluconate	9.65 g	
Calcium D-Saccharate	0.35 g	
Water for injection (q.s.)	100 ml	

Requirements: Beaker, Glass rod, Funnel, Filter paper, Ampoule.

Apparatus

Ampoules, 10 ml- 2

Beaker, 250 ml- 1

Beaker, 100 ml- 1

Measuring cylinder, 10 ml- 1

A syringe with needle, 10 ml- 1

G-4 filter- 1

Autoclave-1

Chemicals

Calcium gluconate

Calcium D-saccharate

Water for injection

Theory

Calcium gluconate injection is a sterile solution of calcium gluconate in water for injection. Not more than 5.0% of the calcium gluconate may be replaced with a suitable calcium salt as a stabilizing agent.

Calcium gluconate is slowly soluble in about 30 parts of water and soluble in about 5 parts of boiling water. Calcium in the form of calcium gluconate is used in the strength of 10% w/v. In fact 10% solution of calcium gluconate in water gives a saturated solution. Any temperature fluctuations during storage yield crystallization of calcium gluconate. Therefore, IP prescribes

to replace a part of calcium gluconate (not more than 5% of the total) by an equal amount of more soluble calcium salt, such as calcium D-saccharate or calcium lactobionate. These soluble calcium salts are called stabilizing agents. The pH of the calcium gluconate injection can be adjusted from 6.0 to 8.2 using sodium hydroxide and/or hydrochloric acid solutions. It is prepared in a single-dose container, preferably a Type I glass container.

Type: Monophasic liquid dosage form-solution.

Preparation of calcium gluconate solution

1. The desired amount of calcium gluconate and calcium D-saccharate are accurately weighed.

2. On account of solubility problems, calcium gluconate is first dissolved in water for injection in the beaker with the aid of heat.

3. Then calcium D-saccharate is dissolved in the above solution.

4. The solution is allowed to cool.

5. After cooling, the drug solution is filtered through a G-4 filter (or Whatman filter paper) to remove any foreign particles.

Filling into ampoules: Filling of ampoules (Type I) is done following the usual procedure.

Sealing of ampoules: The ampoules can be sealed by using the pull-sealing technique.

Sterilization: In general, calcium gluconate injection is subjected to terminal sterilization. This can be achieved by autoclaving at 121°C at 15 lbs/inch² for 30 minutes.

Storage: Store in a cool place.

Auxiliary Labels: Discard, if any particulate matter is present. If crystallization has occurred during storage, warming may dissolve the precipitate. The injection must be clear at the time of use.

Route of Administration: Intramuscular or slow intravenous route**.**

Date of Expiry: 3 years from the date of manufacture.

Report: Prepared and submitted 2 ampoules, each containing 10 ml of Calcium Gluconate injection IP.

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Experiment No.:4

SODIUM CHLORIDE INJECTION

AIM: To prepare and submit 10 ml sodium chloride injection I.P.

Formula:

Sl.No.	Ingredients	Official Formula	Working Formula
1	Sodium Chloride	0.9%w/v	
2	Sterile water for injection	q.s.	

Requirements:

Apparatus Required:

Mortar & pestle

Weigh balance

Measuring Cylinder

Glass rod

Spatula

Beaker

Funnel, etc.

Chemical Required:

Sodium chloride

Sterile water for injection I.P

Theory

Sodium Chloride Injection 0.9% is used to replace lost body fluids and salts. Other medicines which are given by injection or by a drip may be diluted with Sodium Chloride Injection 0.9%. Sodium Chloride Injection 0.9% can also be used as a sterile irrigation solution.

Normal saline is a prescription medication used for intravenous fluid and electrolyte replenishment. Normal saline can be used on its own or in combination with other drugs Crystalloid Fluid is a medication class that includes normal saline Sodium chloride injection is a sterile, pyrogen-free isotonic solution of sodium chloride in water. It has a sodium chloride content of not less than 0.9% wow and not more than 0.25% w/v It does not have any antimicrobial properties. Sienie water for injection is a single-dose container of sterile, nonpyrogenic distilled water for intravenous injection after the addition of an appropriate

solute. It can also be used as a diluent dispensing container. There has been no addition of any antibiotic or other ingredients. The pH level is 5.5. (5.0 to 7.0).

Procedure:

1. The required quantity of sodium chloride should be weighed accurately.

2. Then it should be dissolved in water for injection.

3. The solution should be filtered through a sintered glass filter (No. 3 to 5).

4. The solution should be filled in ampoules with the help of a syringe taking precautions to minimize bacterial contamination.

5. Alternatively the solution should be filled in a clean, dry infusion bottle and a rubber bung should be used to close the infusion bottle.

6. The bottles should be placed in an autoclave at 121°C (15psi pressure) for 10 minutes.

Dose: No specific dose since it is used as a solvent.

Uses: It is used as an absorbent and transport nutrients. It maintains blood pressure and the right balance of fluid.

Storage: It should be stored in glass ampoules and should be stored at 20 to 25°C (68 to 77°F) and should be dispensed within 4 hours.

It should be protected from freezing and stored in a cool and dry place.

Report: Prepared and submitted 10 ml sodium chloride injection I.P.

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Experiment No.:5

TOOTH POWDER

AIM: To prepare and submit a 10g tooth powder.

Formula:

Ingredients	Formula
Calcium carbonate	5g
Sodium bicarbonate	2g
Dicalcium phosphate	1g
Magnesium carbonate	0.5g
Sodium chloride	0.3g
Saccharin	0.2g
Flavoring agent	0.2ml (4 drops)
Binder	0.5g

Requirements:

Apparatus

Mortar and pestle

Weighing balance

Sieve (sieve number 60)

Mixing bowl

Measuring cylinder

Chemicals

Calcium carbonate

Sodium bicarbonate

Dicalcium phosphate

Magnesium carbonate

Sodium chloride

Saccharin

Flavoring agents (e.g., peppermint oil)

Binder (e.g., gum acacia)

Procedure

Accurately weigh the ingredients.

Sieve all the dry ingredients separately through a sieve number 60.

Mix the sieved dry ingredients thoroughly in a mixing bowl.

Gradually add the binder to the dry mixture while mixing continuously to ensure even distribution.

Add the flavoring agent dropwise and mix thoroughly.

Transfer the mixture to a mortar and pestle.

Grind the mixture to ensure a uniform, fine powder.

Wrap the powder in butter paper (8cm x 10cm) or transfer it into an airtight container to prevent moisture absorption.

Label the container with the formulation details and date of preparation.

Uses

To clean tooth.

To keep periodontium healthy.

Prevent dental caries.

Prevent bad breath.

Report: Prepared and submitted a 10g tooth powder.

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Experiment No.:6

DRUG INFORMATION QUERY

AIM: Systematic approach to drug information queries using primary/secondary/tertiary resources of information.

Theory: Drug information center provides an in-depth, unbiased source of crucial drug information to meet needs of the practicing physicians, pharmacists, and other health care professionals. They provide current, critically examined data about drugs and drug use in a given patient. These pieces of information are very important for rational drug use. Primary sources of drug information provide up-to-date information about a particular topic. Secondary sources provide quick access to primary literature.

Procedure:

Procedure: 1. Secure requestor demographics.

It's important to know who is asking, as the response technique may differ depending on whether the question comes from a healthcare professional or a patient. For example: use the word "renal" with a pharmacist and "kidney" with a patient. It's always best to inquire how the requestor would like the information delivered (eg, by phone or fax), as this will help ensure adequate follow-up.

2. Obtain background information.

Determine whether it's a general or patient-specific question, and then identify resources the requestor has already consulted to help facilitate the process. For patient-specific questions, it's important to inquire about age, gender, medical history, pregnancy, weight, renal function, etc, and pinpoint important factors such as the specific drug, dose, route of administration, duration of therapy, and any associated conditions or comorbidities.

3. Determine and categorize the question

If a pharmacist requests information about whether a patient who's breastfeeding can take amoxicillin, this would be classified as a lactation question. Various categories may include pregnancy, drug interaction, pharmacy law, pill identification, adverse effects, dosing, therapeutic uses, contraindications, or pharmacokinetics. Determine if the question is broad or narrow in scope, which will guide the depth of research.

4. Develop a strategy and conduct a search.

First, begin with tertiary literature, which is a compilation of primary literature. This may include textbooks like Drugs in Pregnancy and Lactation or drug information databases like Clinical Pharmacology or Lexicomp. Next, consult the secondary literature resources, which is the path to the primary literature. Secondary resources include PubMed and EMBASE, which will enable to the locate primary literature or original research. It's important to use reputable resources when researching. When using websites, be sure to consult ones ending in .gov or .org.

5. Perform evaluation, analysis, and synthesis.

Objectively critique all of the information retrieved from the comprehensive literature search. Also, consider the background information of the question. Consult pharmacists and other health care professionals with expertise in drug information questions.

6. Formulate and provide a response.

Inform the requestor when one course of action is more desirable. Present competing viewpoints and considerations. Also, describe the evaluation of the research. Written responses should always be concise and fully referenced.

7. Conduct follow-up and documentation.

Following up is important for ensuring the information is received. Always document the drug information questions so that they can be referred back to them.

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DRUG INFORMATION REQUEST FORM

Query No.:

Date: Time:	Name of the Enquirer, Dept. & address:	Tel no: Email:
Enquirer Identity □ Physician □Patient □Nurse □Pharmacist □Social Worker □Others(specify)	Purpose of Enquiry □Academic □Patient Specific □To update knowledge □Others(Please Specify)	Information to give within □10 minutes □30-60 minutes □One day □1-2 days □Other(Specify)
Information Category □ General □ Drug therapy □ ADR □ Drug/Food Interaction □ Pharmacokinetics □ Teratogenicity □ Product Availability □Others(specify)	Query : Signature of the enquirer	

Background Information (Patient Specific):

Name: Age: Sex: Body weight: IP no:
Diagnosis:

Concurrent Therapy:

Renal & Hepatic Status:
Allergies:
Lab Data:

Pharmacist Use only

Mode of Receipt: □ Direct Access □Telephone □Ward rounds □email □ Query drop box □ Others

Query Received by (Name & Signature with Date):
Query Answered by (Name & Signature with Date) :
Query Documented by(Name & Signature with Date) :

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DRUG INFORMATION DOCUMENTATION FORM

Query No.:

<table>
<tr><td>Query answered Date with time:</td><td colspan="3">Query:

Name of the Enquirer:</td></tr>
<tr><td><u>Enquirer Identity</u>
□ Physician
□Patient
□Nurse
□Pharmacist
□Social Worker
□Others(specify)</td><td><u>Purpose of Enquiry</u>
□Academic
□Patient Specific
□To update knowledge
□Others(Specify)</td><td><u>Information to give within</u>
□10 minutes
□30-60 minutes
□One day
□1-2 days
□Other(Specify)</td><td><u>Time taken to provide answer:</u>
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□30-60 minutes
□One day
□1-2 days
□Delayed? (Reason)</td></tr>
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□ Drug therapy
□ ADR
□ Drug/Food Interaction
□ Pharmacokinetics
□Teratogenicity
□ Product Availability
□ Others(specify)</td><td colspan="3">Information provided:

Signature of the enquirer</td></tr>
<tr><td colspan="4">References:</td></tr>
<tr><td colspan="4">Pharmacist Use only

Mode of Receipt: □ Direct Access □ Telephone □ Ward rounds □ email □ Query drop box □ Others
Mode of Answer: □ Verbal-directly □ Telephone □ written □ email □ Printed □ Others</td></tr>
<tr><td colspan="4">Query Documented by(Name & Signature with Date) :
Enquirer’s feedback:
Patient outcome:</td></tr>
</table>

Experiment No.:7

ABC ANALYSIS

Drug store management is based on principles of inventory control. mismanagement of stores and non-applicability of Scientific and Modern techniques have been identified as the root cause of material storage in the majority of hospitals.

The objective of Inventory Control

(i) To supply drugs in time.

(ii) To reduce investment in inventories and make effective use of capital investment.

(iii) Efforts are made to procure goods at the minimum price without bargaining the quality.

(iv) To avoid stock out and shortage.

(v) Wastage is avoided

Techniques of Inventory control

(i) ABC analysis

(ii) VED analysis

(iii) EOQ

(iv) Lead time

(v) Buffer stock

ABC analysis

ABC analysis is an inventory categorization technique. It is a basic tool with a selective approach for concentrating on the items. As ABC analysis the items are divided into three categories— "A items" with very tight control and accurate records, "B items" with less tightly controlled and good records, and "C items" with the simplest controls possible and minimal records. The ABC analysis provides a mechanism for identifying items that will have a significant impact on overall inventory cost, while also providing a mechanism for identifying different categories of stock that will require different management and controls. The ABC

analysis suggests that the inventories of an organization are not of equal value. Thus, the inventory is grouped into three categories (A, B, and C) in order of their estimated importance.

Examples of ABC class are 'A' items – 20% of the items account for 70% of the annual consumption value of the items 'B' items – 30% of the items account for 25% of the annual consumption value of the items 'C' items – 50% of the items accounts for 5% of the annual consumption value of the items.

Another recommended breakdown of ABC classes: "A" approximately 10% of items or 66.6% of the value "B" approximately 20% of items or 23.3% of the value "C" approximately 70% of items or 10.1% of the value.

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ABC ANALYSIS

Exp No.:

Sl. no.	Drugs	Units	Cost	Total Amt	% Unit	% Amt	Rank	↓ % Unit	Cumulative % Unit	↓ % Amt	Cumulative % Amt
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Vision and Mission of the Institution

Vision

The East Point College of Pharmacy aspires to be a globally acclaimed institution, **recognized** for **excellence in** pharmaceutical education, research and nurturing students for **holistic development.**

Mission

M1 Create pharmacy graduates through **quality education**

M2 Promote innovation, **creativity**, and excellence **in teaching**, learning, and **research**

M3 **Inspire** integrity, teamwork, critical thinking**, personal** development, and ethics in **students** and lay **the** foundation for lifelong learning

M4 **Serve** the **healthcare, technological, scientific**, and **economic** needs of then **society**.