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	Alame - Gaus Kailash Gustania
	201818U = an J. Pege No. M.OX 3) 76/
	Date Date
	Unit I Introduction to Pharmacognosy
a	Detination, History, Scope and development of
Co profession	Pharmacounosy.
b	Sources of Daugs - Plants, Animals, Marine &
anaugh)	1 Secure Culture
С	Organized drugs; un Organized drugs (dried latex, dried juices, dried extracts, gums and mucilages, oleoresins and oleo-gum-resins).
	dried juices, dried extracts, gums and
o Hel	mucilages, oleoresins and oleo-gum-resins).
	ADMINISTRATION OF A STATE OF A ST
	Classification of drugs: Alphabetical, Morphological, Taxonomical, Chemical, Pharmacological, Chemo and serotaxonomical classification of drugs.
3-	Alphabetical, Morphological,
	Jaxonomical, Chemical, Pharmacological, Chemo
11,000	and Serotaxonomical classification of cours.
	Quality control of Douge tota Motheral Origin:
The State of	Quality control of Drugs of Natural Origin: Adulteration of drugs of natural origin.
1 -	Evaluation by organoleptic, microscopic, physical,
	chemical biological methods and Properties.
	Quantitative microscopy of crude drugs
100	es de les lucasodium spore method leas constants
mandait	camera lucida and diagrams of microscopic
CONTRACT!	camera lucida and diagrams of microscopic objects to scale with Camera lucida.
	turking -

<u> </u>	9
*	Pharmacognocy
	Pharmacon Gonosis
i i	Dang Study/knowledge
المرا	
	Pharmacognosy is a branch of science
	That deals with the study of
	crude drugs which are obtained
	plants, Animals, minerals and marine
	plants, Animals, minerals and marine
	Sources
*	Phyto chemistry
i hani	
	Phyto Chemistry related to plants related to chemical
TINT	related to plants related to chemical
	compounds
The state of the s	The transfer of the second of
	The chemicals which are obtained from
40000	laans to the same of the same
	Physical Control of the Control of t
	Phytochemistry is the study of phytochem cals, which are chemicals derived terom
	plants. Ore chemicals derived trom
= -	
•	

	Page No.
	Date 1 all
	exatingition) topical and
	Crude drugs = [Drugs obtained strom natural
P	A contact of the state of the s
1000	A crude drug is any naturally occuring, unretined substance derived trom
a free of	Orcionic de la maria 800000 80000
	as plant, animal, bacteria, organs or
5.6 on	whole organisms intended for use in the
	diagnosis cure mitigation treatment or
	prevention of disease in humans or other
	animals.
	1287 Mis Assert Moor Song Contract of the Cont
•)	The word crude drug itselt is selt-
	explanatory and is used with the meaning
	st 'simple drug' and also us it exists in
-	the natural form.
•	The crude drugs are plant or animal drugs that have undergone no other
. Att Provi	drugs that have undergone no other
Trant O.	process than collection and drying.
No. 1	instructed the while polloge deposed the
E MC	and all anish horizon from fronte da
•	Broadly, pharmacognosy is defined as the
	scientific & Systematic & study of structural
- Ade	physical, chemical and biological characters
21	of crucle drugs along with their history,
Invision	method of cultivation collection and
- 4	preparation for the market.
1.	when the o comparand in the state
Shalling.	of self selfon for a sold self

	Page No.
	History of Pharmacognosy Date
	The Council Control
1 4 3 -	The Great Contributors
村川	Hippocrates = He is a greek physician (460-360 B.C.) known as father of medicine
	(460-360 B.C.) Known as father of medicine
1707	Deals with anatomy and physiology of human
Ties	beings.
- 124	A attitude to the standard of
	Azistotle = the renowned philosopaher (384-322 BC)
V-57	is well known for his studies on
Type -	animal kingdom.
~	Do .
-5	Dioscorides = a Greek physician in 78 A.D.
-3/0/	described several plants of medicinal
- indiana	importance in "De materia Medica"
- 50	Stores of the on the hour of alamie of the
<u> </u>	Gralen = He is also a Greek pharmacist
- manth	(131 - 200 A.D.) describe the various
	(131 - 200 AD) describe the various methods of prep containing active constitu-
	ents of crude drug, and even at present
	ents of crude drug, and even at present the branch dealing with the extraction
i i	St plant and animal drugs is known
ns the sa	as Galenical Pharmacy.
Baratay	the state of the s
1 × 9 5	Seydler = He is a German scientist, who
	coined the term pharmacognosy in 1815
	in his work entitled "Analecta Pharmacogne
	Stica" from combination of two Greek
(E)	words vir, pharmakon = a drug and
	gignosco = to acquire the knowledge
	05.

	Page No.
•	Scape of Phase more a small
- m. ls.\	Scope of Pharmacagnosy Herbal medicines
2	Cosmetics
-3	Inclustry
4	Academic
5	Food and drug
6	Traditionatel system of medicine
20 E	The second of th
	Drug - A drug is any substances that can
morin, the	Drug - A drug is any substances that can be inhaled, inject, smoked, absorbed via
1 3/W	patch on the skin or dissolved under the
TE.	tongue that causes a physiochemical change
	in the body.
	4 1 2 4 2 1
	A drug is the substance intended tor
	use in the diagnosis, cure, mitigation, treatment or prevention of disease in human
	& animals
	and and a second of the second
	2 Parist / Dinner Marphin Paine
112	Lources of Drug:
	Plant Louces
	2. Animal Sources
	3 Mineral Bources
	4. Marine Sources
	5. Plant tissue culture.
Inin	Here Cartine (Rational Break)

				Page No.
<u>1</u>	Pl	ant Sou	rces:	o Saran Ala Annan
		plant	PAURIE 18	the oldest and longer
	8	Source_	of drug:	Rain and Marie Villa
	2)	They h	us been	used in we recument
-	0	Nar L	ious disea	ses from ancient time
	15)	the tro	daumal &	Bystem of medicine
	AI	nani s	veda, old	tha Homeopathic and e based on the use
1 2015			James Int	
the had			1 1.	ents products are howing
1-1-2/21-1	in	portant	therapeutic	agents like alkaloiels
nata.	gli	posites,	flowonoids	, enzymes ; volutile oils , etc.
	5)	Example	es =	I may be the miles
	Sa	0 1.		
400	Sz no.	raris	IVame	Constituents
and I	1	Leaves	Dio tali	Dieston D.
	4	heaves	Fucclubtus	Digitoxin, Digoxin Eucalyptus oil Nicotine
	16 0		Eucalyptus Tobacco	Nicotine of
				The same of the sa
1 1 2	2.	Foruit /	Opium	Morphin, Codeine,
		Flower	Vinca	Hervine, Amorphine
<u> </u>	<u></u>	e-Tan Empl	Plant me	Vincristine, Vinblastine.
	3.	D U.	The training	Company to the second s
	J.	Koots	1 pecce	Ematine,
_		Mile all	Rauwalfia	Reserpine
r _i	4	Bark	Cinchona	During (Anto-males)
	7		- Trong with	Quinine (Anti-malaria) Quinidine (Anti-erythmia)
		The same	- 1) · · ·	The transfer of the state of th
			Tel-and	

	Page No. Date
2	Animal Sources: The is a second largest
1 24	Source et drug
\rightarrow	lextain animal part and animal products
->	The major groups et unimals provaducts used in the medicine are hormone,
2	used in the medicine are hermone,
11	enzymes, organs, bile aciels
a	Hormones: Thyroidism modify preparations of gland of sheep and pigs. It is given really to treat patients suffering from thyroid insufficiency
\	Tt is course of eller to treet hotisets
	Suttering from thyroid insubticiency
	THE PROPERTY OF STANDING STANDINGS S
7	Pancreas is a source of insulin used in the treatment of diabetes
\rightarrow	Epinephrin is a hormone produced by
	adrenal medulla and used as a
	Vaso constructor drug.
->	Or tocin is a bidibattide hormone obtained
200	Oxytocin is a polipeptide hormone obtained from pituitary gland by cattles and pigs
	Francisco de Sicosoft de Contractores de Sicosoft
1.021	troymes: Pensin is a protiolate accumes
7 - 0	-> Pepsin is a protiolytic enzymes st gestric juice produced term fresh
	pig stomach.

	Page No.
->	Trypsim is a protiolytic enzymes prepared from extract of pancreas.
1	from extract of pancineas.
	It is used for the topical application
21112	of the treatment of wounds, ulcer, etc.
4>	Para 19 9
	Pancreation is a preparation which
	contain enzymes of pancreas, which is
	contain enzymes of pancreas, which is used to treat digestion problems it is prepared from pig at pancreas.
to	prepared grom sig of sancreas.
C	Animal parts to
->	Animal extractives organs: Liver & Stomach preparations and bile
	are the example of this group
7	Honey from Honey bee
-	Beewax from bees
->	Cod liver trom shark
->	Wood tat turn sheep
->	Carminic Acid from Cachineal
\rightarrow	Venums drom & Snake
	All the state of t
3	Marine Lources:
han	covered with water bodies. Hence to the
1 Mar	covered with water bodies. Hence to the
	moderne compounds (chemical constituents)
	are also obtained from marine
	+lora (Plant) and Farma (Animala) used
	tor the treatment of many diseases
	Williams - V Man

	Page No.	
\Rightarrow	Classification of Drug of Marine 3	Sources
ĵ	Antimicrobial agents /Antibiotics - Lephalosporin - Istanycin	
	- Lephalosporin	
	- Istanycin	
		1900
ű,	southern south to the	
79.	The main that any assistance of the same assi	
201	Antiviral Compounds	0.50
	- Ara A	030
	- Opposital	
	- Averona & Avarrol	
111	Antiparasitic Compounds	
- 111/		2 4214
	- <- Kainic Acid	
	- Laminine	7
1 1 -	- Bengemide 1.	12.65 p. 19
0,11	Anticancer Agent	
10)	- Sinularin	ast 1 .
	- Halitoxin	Sirily a
	- Asparidal	
4	- Aplidin	ACT.
Ĭ.	apuan	112/2
	Cardinage des	
- V)	Cardiovascular Agents	S. Marie
	- Octopamine	Taill .
11	- Tetramine	2010
	- Saxitonin	
Santi	- Laminine	ATTA
- F1011	The subject of the su	

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	Date
√i)	Anti-instanation / Antiplasmodic Agent - Tetradoxin - Menoalide
	and the second of the second o
<u>-</u> Ц.	Plant tissue Culture = Plant tissue culture is
L-~ _	a technique that is used to grow plant
1	a technique that is used to grow plant cells tissues or organs under starile conditions on a nutrient culture medium
	conditions on a nutrient culture medium
	AND
	It is widely used to produce of plants.
	It is technique of control production of useful secondary metabolites.
	The state of the s
The second second	Advantages et plant tissue culture =
	Advantages et plant tissue culture =
•	Advantages of plant tissue culture = production of extract copy of plants
	Advantages of plant tissue culture = production of extract copy of plants To quickly produice mature plants
	Advantages of plant tissue culture = production of extract copy of plants To quickly produice mature plants
	Advantages of plant tissue culture = production of extract copy of plants To quickly produce mature plants, production of genetically modified plants
	Advantages of plant tissue culture = production of extract copy of plants To quickly produice mature plants, production of genetically modified plants. Plant tissue (11)
	Advantages of plant tissue culture = production of extract copy of plants To quickly produce mature plants, production of genetically modified plants. production of disease tree plants.
	Advantages of plant tissue culture = production of extract copy of plants To quickly produce mature plants, production of genetically modified plants, production of disease stree plants. Plant tissue Culture as a source of drug.
	Advantages of plant tissue culture = production of extract copy of plants To quickly produce mature plants, production of genetically modified plants, production of disease tree plants. Plant tissue Culture as a Source of drug. Secondary Plant Type of
	Advantages of plant tissue culture = production of extract copy of plants To quickly produce mature plants, production of genetically modified plants. production of elsease stree plants. Plant tissue Culture as a source of drug. Secondary Plant Type of Culture Metabolities Source Culture
	Advantages of plant tissue culture = production of extract copy of plants To quickly produce mature plants, production of genetically modified plants. production of disease tree plants. Plant tissue Culture as a source of drug. Secondary Plant Type of Culture Reserpine Rauvalfier Suspension Culture
	Advantages et plant tissue culture = production of extract copy of plants To quickly produice mature plants production of genetically modified plants production of elsease tree plants Plant tissue Culture as a source of drug Secondary Plant Type of Metabolities Source Culture Decompose Source Culture

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	Section A = `	C Page No. Date
Sino.	Organized drugs	Inorganised drugs
1.	Thèse are "organs of plants and Animals and Animals and see made up of cells and having definite structure.	These are obtained from parts of plants by some product process of extraction and purification.
2.	This drugs are named as plowers, seeds, stem, etc.	This drugs are named as extract, latex, juice resins etc.
mai = 3;	They are solid in nature	They are solid, semi- solid, and liquid in nature.
4.	Microscopikal study are useful in quality.	Chemical test are pertor for quality control or ivaluation
5.	Examples: Parts of plants exampl	Examples: Llassification
į,	Leaves: > Eucalyptus, Tobacco	
رن <i>ا</i> دینن	Wood → Sandal wood Bark → Linchona	Gums & mucilages -> Acacia, Tragacanth, Guar gum Leiter -> Opium (ageem)
· iv-)	flower -> Vinca, Move, Saptiron.	Waxes - Bes wax
		The Market Market

	Page No. Date
	The same of the sa
#	Dried Later:
1	to the
	tissues that are concerned with secretion
200	contains special secretary ustue. And tissues that are concerned with secretion of gum resin volatile oils and other substances.)
	San Day of the Control of the Contro
一	A latex is a milky bluid which is usually exucled after tissue injury / incission.
Jam 19	usually enucled after tissue injury
Juni D	incission.
\rightarrow	It is usually a white aqueous
	It is usually a white aqueous suspension in which small particle of oil
- 1941	globules are suspended. This natural suspension
3	of milky consistency may contains proteins, alkaloids, starch, resins, gums, oils, tanins, sugar, etc that cogulate on exposure to
	sugar, etc that cogulate on exposure to
eck-soct	air tet whingal her walk the standard to the
20	eg opur opium papain, etc.
\rightarrow	These pharmaceutical latex were collected died
	and therapeutically used.
#	Dried Trices =
	These juices are obtained brom
Henrika Siza Sira	entraction or pressing of regatables and
1 Mapt	The
X.	parts of plants, collected and dried
	Mary Mary Mary
	examples = leaves = Aloe, Steam = Kino

	Page No.
#	Dried entracts =
87	→ An extract is a concentrated preparation of a drug which is soldined by removing active constituents of the drug
	solvent and evaporating to obtained a
<u></u>	The entracts were prepared by using
J. H.	The extracts were prepared by using water, alcoholic, hydro-alcoholic solutions.
	example = tea, helatin, catechu, etc. L'Entract trom acacio used as food adition]
#	Gums =
-44	plant an metabolism formed by injury of the plants and by in break
	down at the cell walls.
<u> </u>	They are produced by process known as
2 that	They are translucent amorphaus substance of plant hydrocollides produced by plants.
$\stackrel{\longleftarrow}{\rightarrow}$	They are soluble in nature water and gives a viscous sticky solutions.
	Memory & Company

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	Page No. Data
→	They are insoluble in alcOhol and other organic solvents.
D	ey: troganth tragacanth, gum, acacia,
#	Mucilage: → Mucilage are also plants
	products which are similar to gum. but are generally the namely products of plants metabolism formed within the cell.
	The same of the sa
->	With water it forms a sliny mass but don't dissolve.
the state of the s	In pharmacy gums and mucilage are used as a binding and thickening gagent
.42	eg: Isabgal, Agar, Fenugruk Squill
#	Oleo-Resins =
191-012	are composed of resin with volatile oil
15117	Oleo-resin are prepared trom: * Ginger * Turmeric * Clove * Cordonum (:/ /:)
	* Clove * Cardamum (ilachi) * Caplium * Cinnaman

	Page No.
→	They are used as a plantouring agent in persumery some are used as medicinally
	The state of the s
	Oleo gum resin = Tt is a mixture of volatile
	some plants and trees. ex: Asatoatida, Myurh.
1, 4, 15, 17, 2	Some plants and trees
3)	ex: Ascitoatida, Myurh.
#	Classification of Crude drugs:
	THE CONTRACT OF STANDARD AND A CONTRACT OF STAND
	Crude drug: the crude drug are the
	which are directly obtained trom
	Grude drug: The crude drug are the unprocessed form of drug. which are directly obtained terom natural source like plants, unimals etc.
-	
	for the proper & adequate study of crude drug it is necessary to arrange
	them in scientific and systemic manner.
-	
•	Classified in seven types:
1	Alphabatical classification
2	Morphological classification
_ 3	Pharmacological classification Chemical Classification
4	Chemical Classification
	Taxo-chemical Classification Chemo-toxochemical classification
٦	Sero-taxochemical Classification
TF.	hoolin = Milast

		Page No. Date
		La la La Comple
	1	Alphabatical classification of Crucle drug:
34		I 110 desidication the crucle drug
	→	In this classification to the
1=1.	1	In this classification the crucle claus are arrange according to the alphabates
1111	1.0	alphaballs
	->	Most at the Reference book and pharman
		- pia are arranged according to the
100		latin or english name they are:
	رنا	British pharmacopia
	(الْ	British Pharmaceutical codex
	رئند	U.S.P. which along the state of
-1	رلائ	The Post of the second of the
	رلا	British Herbal pharmacopia
ste	5/1	riso at all told some facilion
		Example:
10 F 11	570	Trushing the state of the state
- 1	in co	A > Amla, Ager
000	YNER	B → Balsam, Bentonite
		C ⇒ Linnamon, Linchona
		D > Phatura, Digilatis
		E => Eucalyptus
		F > fennel matterior instantial A
		Granger ministrations ministration
		H > Honey
ler s	-3-	1 > I perac
		J => Jatamansi
1	- W	K -> halmegh
		1 -> Lemon
		M → Mysoch

	Page No. Date
	N > Nutmeg, Neem
	O => Opium
-	D > pepper, papaya
*	Q -> Ouassia
	R -> Rom Romolpia
	S → Senna T → Tulsi, Turmeric
11 11	T > Julsi, Turmeric
- July	V => Vinca
	W → Withonia (Ashawgandha)
Į.	1 -> Yeast
	There was a strain of the strain of the
2	Morphological Classification System of crucle
	drug.
2227	drug
Ally	The crude drug are classified in organized and unorganized manner:
1)	The crude drug are classified in organized and unorganized manner: Draganized drug = In this drug are
1)	The crude drug are classified in organized and unorganized manner: Drganized drug = In this drug are classified as:
1)	The crude drug are classified in organized and unorganized manner: Drganized drug = In this drug are classified as:
را.	The crude drug are classified in organized and unorganized manner: Dryanized drug = In this drug are classified as: Parts Prugs Bark Cinchona, Cinnamon
i)	The crude drug are classified in organized and unorganized manner: Drganized drug = In this drug are classified as: Parts Parts Park Cinchona Cinnamon Root Rouvoltia Liquorice
(i.	The crude drug are classified in organized and unorganized manner: Dryanized drug = In this drug are classified as: Parts Prugs Bark > Cinchona Cinnamon Root > Rauwolfia Liquorice Leaves > Eurolyptus, Senna
() () () () ()	The crude drug are classified in organized and unorganized manner: Draganized drug = In this drug are classified as: Parts Parts Parts Parts Cinchona Cinnamon Root > Rawolfia Liquorice Leaves > Eucolyptus, Senna flower > Sapron Llove Vinca
(1) (2) (3) (4) (4)	The crude drug are classified in organized and unorganized manner: Draganized drug = In this drug are Classified as: Parts Parts Parts Cinchona Cinnamon Root Rowelfia Liquerice Leaves Suralyptus, senna Flower Sapron Llove, Vinca Seed Almond coptee heans.
(1) (1) (2) (3) (4) (4)	The crude drug are classified in organized and unorganized manner: Draganized drug = In this drug are classified as: Parts Parts Parts Parts Roundfia Liquorice Leaves Flower => Suralyptus, Senna Flower => Sapron Llove, Vinca Fruits => Opium, Bale, Fennel. Seed => Almond, coptee, beans. entire plants => Vinca (Vinusting, Vinklasting)
i) b) c) d) e; f) g	The crude drug are classified in organized and unorganized manner: Draganized drug = In this drug are classified as: Parts Parts Parts Parts Roundfia Liquorice Leaves Flower => Suralyptus, Senna Flower => Sapron Llove, Vinca Fruits => Opium, Bale, Fennel. Seed => Almond, coptee, beans. entire plants => Vinca (Vinusting, Vinklasting)
() () () () () () () () () () () () () (The crude drug are classified in organized and sunorganized manner: Drganized drug = In this drug are classified as: Parts Parugs Bark \(\Rightarrow \) Cinchona Cinnamon Root \(\Rightarrow \) Ramboltia Liquorice Leaves \(\Rightarrow \) Eucolyptus, senna flower \(\Rightarrow \) Sapron, blove, Vinca Fruits \(\Rightarrow \) Almond, coptee, beans entire plants \(\Rightarrow \) Vinca (Vinusting, Vinplasting)

-	Page No.
<u>ii)</u>	Unorganized drug =
	Classification/Lategory Drugs extracts Tea Grelatin
2)	fixed oil -> Castor oil
4)	
,	Juice -> Amla Alovera
	Gum - Tragacanth, Acacia, Guar.
	in the execution promised (Another to the LA)
7	101/1010
	Pharmacological Classification =
200	this charting to
To I	une classified in Produced "
: 4	this classification the crude drugs are classified in P. cological in Therapeutic activity they are as follows
	The state of the s
	P. Cological Activity Drug
	Larminatives > tennel, clove, corriander,
	Eagent that, cinnamon
°°	expel out gas forom the body.] Antimalaria - Sinchona, Artimisia
iii	Anticancer > Vinca, Taxus
11	HI GOTTI IN Program at Track - > 111 - 2 C /2 1
V	Spasmodic - Thatura thypercumus
ÝĄ.	Spasmodic -> Dhatura, thyoscypmus Bitter -> Gentian, Cherata
NH,	Expectorant - Opium, liquorous

	Page No. Date
4	Chemical Classification =
dr. at	In this classification
- 2	the chemical or active constituents present
	Chemical Classification = In this classification the drug is arranged according to the chemical or active constituents present on crucle drug, they are as tollows:
رائد المالية	eg Chemical or active Constituents Drugs" Alkalvids -> okium , Vinca , Linchona , datura , Nux-Vomica
رٽن	glycon + aglycon shows therapeutic activity
	Glycosides => Senna, Aloc, Bitter, Almonds. glycon + aglycon -> shows therapeutic activity (sugar) (non-sugar)
	Volatile vils -> Eucalyptus, Clove, fennel, Cardemun
روبلأ	Vitamins -> Shark liver oil, cod liver oil.
V)	Enzymes -> Papain, Tryposin.
بالمثل	Corbohydrates -> Trageranth, honey, agar, Isappe
vii	Lipids -> paratifin oil (wax), Bels wax
vii	Resin -> Asafreticla, myrh, ginger.
The same of	Exections It Bootinghison will read the
	- My stadentify with the in the sail from the
	Ansie was the second se

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ria.					Page No.	
in the	Texonomical the drug shylum family Division	Classis are class,		= In to d according to the second sec	this cling	rssitication to
Sa Dig	Division	Class	Order	family	Genus -	Species
i) Senna	Angio Sperm	Dicotlydon	Rosales	Legumino	a Cassia	Angustifoli
²) fennel	mild of the	A 110	Umbilli- Farae	Umbelli- -beral	foenic-	Vulgare
3, Nux- Vomica	A to the same to		Gientiano- Les	Logania -execae	Strye -hnos	Nux- Vomico
→ →	Chemotoxic Applying chemotoxone These This chemical the exis the plant In this taken in proved all of constit	chemistra emical classifica similar tance tance plant ito co	tion is ities of the second resideration	based relained notitivents lary mon Re	on the axon libraship	t as

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	Page No.
7	
a	Tropane alkaloid = Solanceae family
	eg. Patura,
1 - S 7 - 10	Bellaclonna,
	Hyoscyamus.
	Rutin = Rutaceae family
	4 by Havinaids - cent in cetrus truits
	e.g. Amla lemmon etc green tea.
	Seximmina e The Term acultication
17	Serotaxonomical Classification =
-1	The sero-taxonomy can be explained as the
	Study about the application for the
	utility of serology in solving the toxonomical problems.
Actual Maria	unionium fromens.
	Serology can be defined as the study
	of Antigens, Antibody reaction.
	the familiary the same maintains the
\rightarrow	Antigens = are those substances which can stimulate the formation of antibody
	stimulate the formation of antibody
	Antiboely - is the highly specific
1777	Lell in the immune system.
D	enclosed by a state of source of contacts
\rightarrow	This classitication expresses the similarities and dissimilarities among dist texa
	and dissimilarities among dist" texa
	Tt 1+ 0 1 1 10 04 03 01 10
	between shelies "Genera" or Genus' trimily of
	It determines the degree of similarities between species Genero' or Genus' family etc. by comparing the reaction with
El i	

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	Page No.
	antigens from voicious plant texa with antigens from voicious antibodies present
	against a given taxen.
	Desination = The term adulteration is a
1 : 1	bractice of mixing or substituting the original drug partially or wholy with other similar looking substance.
	The Adulterated drug have looss its actual or original therapatic properties & some time from torm a toxic product.
#	Londition of Adulteration: Admixture: Adding of substances of to
	eg: Collection of two disterent sheries
<u>.</u> H.	there may be a change of mixing above species due to carlessness
	The second of th
12	THE SHARE THE STATE OF THE STAT

	Page No.
2	Sophistication: It means intentionally mixing
	Sophistication: It means intentionally mixing upto original coucle drug with
	adulterant.
	eg brick powder use in Ked Chilly powder.
Ser. F	The state of the s
Man	
3	Deterioration = Due to microbial attack high temperature, incorporation of impurities causes decrease in quality of drug.
	· L. · lo
	impurities couses decrease in quality
-	195 elrug.
4	Substitution: It means use of similar looking substance implace implace of original drug. eg: Lotton seed oil in place of place of place of
. 4	Inaking substance implace inplace of
	original drug.
	eg: Lotton seed pil in blace et
	plive pil strice ages 2 miles
<u> </u>	
5	Spoilage: Due to improper storage & atlacking of microbes causes therapeutic loss of product and may be also form to texic product.
	attacking of microbes causes therapeutic
	loss of product and may be
	also form of texic product
	The state of the s
6	Interlairity: (low quality product) In this missing of original drug with intertive quality product.
	In this missing of original
	drug with intertive quality product.
	The state of the s
Tan	the transfer of engineer to matthin to
	the state of the s
	tonic and the second se

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	Page No.
#	Types of Adulteration
	The second secon
As es as	Direct Adulteration Indirect Adulteration (intentionally / knowingly) (unknowningly / unintentionally)
<u>, </u>	(intentionally / knowingly) (intentionally) tionally)
4.1	Intentional Adulteration:
1,7	- Prêce of drug is normally high.
	- Product is not subticient just for protit.
0	dimine the same services the state of the last of the
2)	Adulteration with Similar looking substance = eg: papaya seed in black pepper,
to the	Bees wax with Tapan wax Indian Senna with Arabian Senna
0	
cii? beatic	Adulteration with exhausted material = eg: exhausted clove with a volatile vil
000	Adulto etion with A the and
	Adulteration with Artibicially manufactured substances:
	eg Bees wax with Parratin wax
i	Adulteration with Synthetic chemical: eg. Citral in Citraus oil (lemmon)
	A destination of lemmon)
	Addition of useless part of some planti- eg. Stem part of in Senna leaf
	Janua Weg

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vi	Adulteration of Powder:
	Adultrates with waste products.
- 15	eg bricks powder is mixed with
	red chilli powder
1 8 h	and the continue and arthur all and actions
2	Indirect Adulteration:
	Reasons =
	Due to carelessness,
	ignorance, accidently and unknowingly.
i	Caulty or careless collection: Here adulteration
	-n is caused by miss handling of
-	Faulty or careless collection: Here adulteration of drugs by collection & supplies.
ů)	Improper processing: In this case
	the extranious matter is not removed
1	after collection, improper, drying, etc.
ů	Improper Storage: In this case proper storage of drug is
	proper storage of drug is
	not done the drug stored in
	unsealed bottle or the drug box.
	stored in open area may lead to
	degrecodation of drug cause adulteration
	The state of the s
NOS-mar	

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ives	Similarities in markhology= eg: Mucuna prunines is morkhologically similar to Mucuna utilis.
	Him had been the many that the state of the
18)	Name Conclusion: The adulteration also happen when the pronounced pronounciation of drug is almost same.
	almost same
	eg: Parakatuka (is used in ayurvedic system of medicine) Paradagem (used in siddha system of medicine).
#	Quality Control of Crude drug:
	control is a system of maintaining standard in product by ensuring it identity furity and its quality
	Evaluation Method st Crude Dang: 1) Organoleptic / Morphological evaluations 2) Microscopic evaluation 3) Chemical evaluation 4) Physical evaluation 5) Biological evaluation

	Page No. Date
	Organoleptic / Morphological evaluation:
: N	a technique of qualitative evaluation
	a technique of qualitative evaluation based on the morphological and sensory profites.
•	2 C. M.
	Morphological evaluation: In this the drugs are identified on the basis of size shape and other specific feature.
•	Organoleptic evaluation: In this case drugs
	Organoloptic evaluation: In this case drugs are identity by the help of sensory organ.
	colour, oclour, touch, texture, taste,
	one- Matabasisco (sunstinuente
2	Microscopic evaluation method:
	method the organised drugs are use to identify by its histological and
	morphological character, cell.
•	The characteristics like trichomes (hairy
	like structure present in Dhatura), bibers, Vascular bundles, Tylem, phylum,
	Cholenchyma & other cell contents can be studied under this

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	Page No. Date
3	Chemical evaluation & method: It involves
	the determination of crude drug
	i, Qualitative test: Quality determine
77.0	ii) Quantative test: Quantity determine
2675	iii) Chemical assay: 1. 10t drug iv) Instrumental analysis: functional group
	iv) Instrumental analysis: functional group determine by chematography & Spectroscopy.
	Oualitative test:
3. no	Metabolites/constituents Test Alkaloids Propendrulit test
17/20	Mayen's test Wagner's test
	Hagens test.
Territor	Gregoricles Legal test Beget test Bezortegen test
	Serntrager test Saponin test

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	Date
3	Larbohydrates Mollish test. Bendict test.
	felling'n test
4	Proteins millien's test
Minar.	Biuret test
Mint?	Ninhydrin test
5	flavouride Sta Shinoda test
in cart	rende armana Kasa Rhamana and A - 2141/1
ii	Quantative test:
- 4,	eg Ash value, Todine value
	Ester Value, Acid Value
3 30 5	Saphonitication value
toris	
- 111	Chemical Assay:
	approximate value of total
	phytoconstituents in a crude drug
	is determined
114	The star of howevery no se out
iv	
+	Analysis the chemical group of
	phytis constituents using chramatogra-
	Analysis the chemical group of phyto constituents using chramatogra- phic and spectroscopic method:
Jagar.	all the maintain of market and the
	of the court to the interest of
thouse	tunting to a different mint
- 1	

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	Page No.
	The chromatrographic method include >
م ا ا ا ا ا	TLC - Thin layer chromatography Gas Chromatography Paper Chromatography HPLC - High Pressure Liquid Chromatography / High performance Liquid Chromatography
(a) b) £)	Spectroscopy method include => UV visible septroscopy NMR - Nuclear magnetic Resonance spectroscopy Inbrared spectroscopy
4	Physical evaluation Method: The physical
e 1)	evaluation method for crude drug are as follows: Moisture content: The percentage of
	drug is expressed in air dry basic
+	It should be minimized to prevent the de-composition of crude drug or due to chemical change of microbial contamination.
	The moisture contain content is determined by the heating of drug at 105°C in oven to a constant weight.

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	Page No. Date
*	Prug Moisture content in percent Alloe Not more than 10%
_1)	Alloe Not more than 10%
2011	Dicitalia Not man Ex
- H	Digitalis Not more than 5%
ii)	Viscosity: The viscosity of liquid drug is constant at a given temperature.
V. E.	drug is constant at a
	given temperature.
000	Melting boint: To check the kurity of
_ 111.7	Melting point: To Check the purity of drug this parameter is used.
-	
->	for pure chemicals, phytochemical M.P. is very sharp and constant.
	is very sharp and constant.
#	Drug m.P in : Chen de A in
_a	Wool fut 34 to 44 C
- k	E 200 1000 62° to 65° C
-0	the water satisfication and annument
	Cocoa butter 30° to 33°C
	The state of the s
101.10	Solubility = An adulterant can be detected
4)***	Vin a crude drug by
	solubility studies.
90	in pranic solvent
	in organic adverti
5	

	Page No. Date
√ \$)	Optical Rotation activity: It is determined
	by using no lamp as a light source at 25°C.
= = = = = = = = = = = = = = = = = = = =	Certain substances are tound to have
, T	Certain substances are tound to have the property of rotating the plane polarised light in the pure state.
*	Drugs Angle of splical rotation
nul a	Honey 13° to - 15°
Ab ^o	Castor oil
- Vi)	Ash value = The residue remaining after insigration in that ash contain drug.
•	It reconstant the inorganic salts like carbonates, phosphates, silicates etc.
5	Biological evaluation = This methods are
Kalva	experimental animals like Rat
Ala.	organ and tissues and according as bioassay or biological assay
7	

	Page No.
•	The plant extracts are used here to determine the P cological activity, potency & toxicity.
	pourcy of markety.
\Rightarrow	In this method tollowing activities
	are checked:
	1) Anti dicuratic Activity 25 Analgesic Activity
	3) Anti ulcer Activity
	4) Anti-indlamatory Activity
1	4) Anti-instamatory Activity 5) Anti-Pyratic Activity
#	Quantitative Microscopy of Gude Drug:
i Slat	Lycopodium Spare Method:
	It is an analytical technique used for powdered drug it determine
	es the no of spare present in
	mg of sample.
	Here Lycopodium is taken as a reference
	or standard drug about 94,000 Spores
	are tound in Img. 05 powder
	lycopodium.
	A powdered drug is evaluated by
	Tycopodium spore method -
	7

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eg	the % purity of ginger pounder is calculated by
	1. Purity of drug N×W×94000×100
	SXMXP
	the second of th
	where,
	N= no . of characteristic structure
	in 26 seets
	W = weight of lycapodium in (mg)
	S = no. of lycopodium spores
Bles	M = Weight of Sample (in mg) P = 2 lack thousand
() is	
	In case ginger starch grain powder
#	Lect Constant:
m d	The determination of
631	least constant can be done by
-	The state of the s
<u>a</u> ,	Palisalde ratio
	Vein islet no.
- JC)	-Stomatal & III
1	
رم	Palisade ratio: 4+ 10 +60
	each epidermal cell.
	· · · · · · · · · · · · · · · · · · ·

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<u>b)</u>	Vein islet no: It is desined as the no. ob vein islet for sq. mm of the leat surface midway between the midrip and the margin.
<u></u>	Vein termination no.: It is defined as the no. of vein led termination per sq. mm at the least surface mid way between midrip margin is per sq. mm.
y)	Stomatal index: It is the percentage which the no. of stomatas forms of the total no. of epidermal cells. SI = S x 100 E+S
	where, $S = no. \text{ ot stomata per unit}$ $Area$ $E = no. \text{ ot epidermal cell in the}$ $same unit Area.$