

Performa : Hindu College of Pharmacy				
Lesson Plan				
Name of the faculty		Naveen		
Discipline		Pharmacy		
Semester		1 <sup>st</sup> Year		
Subject		Pharmaceutics-1		
Lesson plan Duration		25 weeks (JULY 16, 2018 to April 06, 2019)		
Work Load/week(In hour)		Lecture- 03; Practical- 09		
Week	Theory		Practical	
	Lecture Day	Topic	Practical Day	Topic
1 <sup>st</sup> (JULY3 <sup>rd</sup> week)	1 <sup>st</sup>	Introduction of different dosage forms.	1 <sup>st</sup> (Batch A)	Preparation of Aromatic water
	2 <sup>nd</sup>	Introduction of different dosage forms.	2 <sup>nd</sup> (Batch B)	- ---do----
	3 <sup>rd</sup>	Introduction of different dosage forms.	3 <sup>rd</sup> (Batch C)	----do----
2 <sup>nd</sup> (JULY4 <sup>th</sup> week)	1 <sup>st</sup>	Their classification with examples-their relative applications	1 <sup>st</sup> (Batch A)	Preparation of Aromatic water
	2 <sup>nd</sup>	Description of different dosage forms	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Description of different dosage form	3 <sup>rd</sup> (Batch C)	----do----
3 <sup>rd</sup> (JULY 5 <sup>TH</sup> /AUG.1 <sup>ST</sup> week)	1 <sup>st</sup>	Tutorial/Test	1 <sup>st</sup> (Batch A)	Viva-voca
	2 <sup>nd</sup>	Familiarisation with new drug delivery systems	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Familiarisation with new drug delivery systems.	3 <sup>rd</sup> (Batch C)	----do----
4 <sup>th</sup> (AUG. 2 <sup>nd</sup> week)	1 <sup>st</sup>	Tutorial/Test	1 <sup>st</sup> (Batch A)	Preparation of Solutions
	2 <sup>nd</sup>	Introduction to Pharmacopoeias	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Indian Pharmacopoeia.	3 <sup>rd</sup> (Batch C)	----do----
5 <sup>th</sup> (AUG. 3 <sup>rd</sup> week)	1 <sup>st</sup>	Tutorial/Test	1 <sup>st</sup> (Batch A)	Preparation of Solutions
	2 <sup>nd</sup>	Metrology Systems of weights and measures. Calculations including conversion from one to another system	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Percentage calculations and adjustments of products. Use of alligation method in calculations	3 <sup>rd</sup> (Batch C)	----do----
6 <sup>th</sup> (AUG.4 <sup>th</sup> week)	1 <sup>st</sup>	Isotonic solutions.	1 <sup>st</sup> (Batch A)	Viva-voca
	2 <sup>nd</sup>	Test of Alligation method and isotonic solutions	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Packing of Pharmaceuticals Desirable features of a container	3 <sup>rd</sup> (Batch C)	----do----

		types of containers. Study of glass		
<b>7<sup>th</sup>(AUG.5<sup>TH</sup> week)</b>	<b>1<sup>st</sup></b>	Plastics as materials for containers	<b>1<sup>st</sup> (Batch A)</b>	Preparation of Spirits
	<b>2<sup>nd</sup></b>	Rubber as material for closures-their merits and demerits	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Introduction to aerosol packaging	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>8<sup>th</sup>(SEPT.2<sup>ND</sup> week)</b>	<b>1<sup>st</sup></b>	Size reduction Objectives, and factors affecting size reduction	<b>1<sup>st</sup> (Batch A)</b>	Viva-voca
	<b>2<sup>nd</sup></b>	Methods of size reduction, study of Hammer mill	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Ball mill, Fluid Energy Mill and Disintegrator	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>9<sup>th</sup>(SEPT.3<sup>RD</sup> week)</b>	<b>1<sup>st</sup></b>	Unit test	<b>1<sup>st</sup> (Batch A)</b>	Preparation of Tinctures
	<b>2<sup>nd</sup></b>	Size separation Size separation by sifting. Official Standard for powders	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Sedimentation methods of size separation	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>10<sup>th</sup>(SEPT.4<sup>TH</sup> week)</b>	<b>1<sup>st</sup></b>	Construction and working of cyclone separator	<b>1<sup>st</sup> (Batch A)</b>	Preparation of Tinctures
	<b>2<sup>nd</sup></b>	Unit test	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Mixing of semisolids with mills Study of Silverson Mixer, Homogeniser, Planetary Mixer, Agitated powder mixer	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>11<sup>th</sup>(SEPT.5<sup>TH</sup> week)</b>	<b>1<sup>st</sup></b>	Study of Silverson Mixer, Homogeniser, Planetary Mixer, Agitated powder mixer	<b>1<sup>st</sup> (Batch A)</b>	Preparation of Tinctures
	<b>2<sup>nd</sup></b>	Clarification and Filtration- Theory of filtration,	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Filter aids and selection of filters. Study of the following filtration equipments Filter Press Sintered Filters	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>12<sup>th</sup>(OCT.1<sup>ST</sup> week)</b>	<b>1<sup>st</sup></b>	Filter Candles, Meta filter	<b>1<sup>st</sup> (Batch A)</b>	Viva-voca
	<b>2<sup>nd</sup></b>	Study of percolation, continuous hot extraction, Maceration and their modification	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Applications in the preparation of tinctures and extracts	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>13<sup>th</sup>(OCT.2<sup>ND</sup></b>	<b>1<sup>st</sup></b>	Unit test	<b>1<sup>st</sup> (Batch A)</b>	Preparation of Extracts

<b>week)</b>	<b>2<sup>nd</sup></b>	Introduction to Ayurvedic dosage forms.	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Heat processes: Evaporation definition factors affecting evaporation	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>14<sup>th</sup>(OCT.4<sup>TH</sup> /5<sup>TH</sup> week)</b>	1 <sup>ST</sup> Sessional Examinations.			
<b>15<sup>th</sup>(NOV.3<sup>RD</sup> week)</b>	<b>1<sup>st</sup></b>	Study of evaporating still and Evaporating Pan	<b>1<sup>st</sup> (Batch A)</b>	Preparation of Creams
	<b>2<sup>nd</sup></b>	Unit test	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Distillation : Simple distillation	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>16<sup>th</sup>(NOV.4<sup>TH</sup> week)</b>	<b>1<sup>st</sup></b>	Fractional distillation	<b>1<sup>st</sup> (Batch A)</b>	Viva-voca
	<b>2<sup>nd</sup></b>	Steam distillation, Vacuum distillation	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Preparation of Purified Water I.P. and water for injection I.P. Construction and working of the still used for the same	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>16<sup>th</sup>(DEC.2<sup>ND</sup> week)</b>	<b>1<sup>st</sup></b>	Study of vacuum still		Preparation of Cosmetic preparations
	<b>2<sup>nd</sup></b>	Unit test	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Introduction to drying processes Study of Tray Dryers: Fluidized Bed Dryer	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>17<sup>th</sup>(DEC.3<sup>RD</sup> week)</b>	<b>1<sup>st</sup></b>	Vacuum Dryer and Freeze Dryer	<b>1<sup>st</sup> (Batch A)</b>	Preparation of Cosmetic preparations
	<b>2<sup>nd</sup></b>	Unit Test	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Sterilization Concept of sterilization and its differences from disinfection- Thermal resistance of microorganisms	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>18<sup>TH</sup> (DEC.3<sup>RD</sup> /4<sup>TH</sup> WEEK)</b>	2 <sup>ND</sup> SESSIONAL EXAMINATION.			
<b>19<sup>th</sup>( JAN.2<sup>ND</sup> week)</b>	<b>1<sup>st</sup></b>	Classification (Methods) , Moist heat sterilization, Dry heat sterilization	<b>1<sup>st</sup> (Batch A)</b>	Viva-voca
	<b>2<sup>nd</sup></b>	Sterilization by radiation and filtration	<b>2<sup>nd</sup> (Batch B)</b>	----do----
	<b>3<sup>rd</sup></b>	Gaseous sterilization	<b>3<sup>rd</sup> (Batch C)</b>	----do----
<b>20<sup>th</sup>(JAN.3<sup>RD</sup> week)</b>	<b>1<sup>st</sup></b>	Aseptic techniques. Application of sterilization processes in hospitals particularly with reference to	<b>1<sup>st</sup> (Batch A)</b>	Capsules

		surgical dressings and intravenous fluids		
	2 <sup>nd</sup>	Precautions for safe and effective handling of sterilization equipment	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Unit test	3 <sup>rd</sup> (Batch C)	----do----
21 <sup>th</sup> (JAN.4 <sup>TH</sup> /5 <sup>TH</sup> week)	1 <sup>st</sup>	Definition; Different types of compressed tablets		Tablets
	2 <sup>nd</sup>	Different types of compressed tablets and their properties	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Processes involved in the production of tablets, Tablets excipients	3 <sup>rd</sup> (Batch C)	----do----
22 <sup>st</sup> (FEB.2 <sup>ND</sup> /3 <sup>RD</sup> week)	1 <sup>st</sup>	Processes involved in the production of tablets, Tablets excipients	1 <sup>st</sup> (Batch A)	Viva-voca
	2 <sup>nd</sup>	Defects in tablets	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Evaluation of Tablets; Physical Standards including Disintegration and Dissolution	3 <sup>rd</sup> (Batch C)	----do----
23 <sup>RD</sup> (FEB.4 <sup>TH</sup> week)	1 <sup>st</sup>	Evaluation of Tablets; Physical Standards including Disintegration and Dissolution	1 <sup>st</sup> (Batch A)	Ophthalmic preparations
	2 <sup>nd</sup>	Sugar coating and Enteric coating	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Microencapsulation	3 <sup>rd</sup> (Batch C)	----do----
24 <sup>TH</sup> (MAR.2 <sup>ND</sup> week)	1 <sup>st</sup>	Processing of Capsules, Hard and soft gelatin capsules, different sizes capsules	1 <sup>st</sup> (Batch A)	Viva-voca
	2 <sup>nd</sup>	filling of capsules, handling and storage of capsules	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Special applications of capsules.		----do----
25 <sup>TH</sup> (MAR.3 <sup>RD</sup> /4 <sup>TH</sup> WEEK)	3 <sup>RD</sup> SESSIONAL EXAMINATION.			
26 <sup>th</sup> (MAR.5 <sup>TH</sup> week)	1 <sup>st</sup>	Study of immunological products, classifications	1 <sup>st</sup> (Batch A)	Preparations involving aseptic techniques
	2 <sup>nd</sup>	Immunity, types of immunity and factors responsible for immunity	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Unit test	3 <sup>rd</sup> (Batch C)	----do----
27 <sup>th</sup> (APR.1 <sup>ST</sup> week)	1 <sup>st</sup>	Vaccines, toxoids	1 <sup>st</sup> (Batch A)	Viva-voca
	2 <sup>nd</sup>	Serum- Rabies, antibacterial serum	2 <sup>nd</sup> (Batch B)	----do----
	3 <sup>rd</sup>	Immune blood derivatives	3 <sup>rd</sup> (Batch C)	----do----

After onwards revised the queries regarding the syllabus.

