LESSON PLAN

Name of the Faculty	Mr Satish Kumar
Discipline	D. Pharmacy
Year	Ist year
Subject	Pharmaceutics ER20-11T/ 11P
Lesson PlanDuration	30 weeks (from 2023-2024)

Work load (Lecture/practical) per week (in hrs):

Week		Theory	Practical	
	Lecture Day	Topic/test	Practical day	Topic
1st	1	History of the profession of Pharmacy in India in relation to Pharmacy education, industry, pharmacy practice, and various professional associations.	1st	To study the official pharmacopeias, formularies with their handling and official references.
	2	industry, pharmacy practice, and various professional associations		
	3	Pharmacy as a career,		
2nd	1	Pharmacopoeia: Introduction to IP, BP, USP, NF and Extra Pharmacopoeia.	2nd	To prepare and submit liquid oral simple syrup
	2	Salient features of Indian Pharmacopoeia		
	3	Test of chapter-1		
3rd	1	Packaging materials: Types, selection criteria	3rd	To prepare and submit castor oil emulsion
	2	advantages and disadvantages of glass, plastic		
	3	advantages and disadvantages of metal, rubber		
4th	1	Pharmaceutical aids-Introduction, organoleptic proper ties- coloring.	4th	To prepare and submit cod liver oil emulsion
	2	Organoleptic properties- sweetening and flavouring agent.		
	3	Preservatives		
5th	1	Size reduction- definition, hammer mill and ball mill.	5th	To prepare and submit calamine lotion

	2	Size separation, classification of powder according to IP		
	3	Cyclone separator		

6th	1	Sieves and standards of sieves	6th	To prepare and submit simple ointment base.
	2	Revision		
	3	Test		
7th	1	Mixing – double cone blender, turbine mixer	7th	To formulate and submit sulphur ointment
	2	Triple roller mill and silverson mixer homogenizer.		
	3	Assignment		
8th	1	Filteration- theory of filteration,	8th	To formulate and submit cetrimide cream
	2	Membrane filteration, sintered glass filter		
	3	Drying		
9th	1	Tablets- basics of tablet formuation	9th	To prepare and submit sodium alginate gel
	2	Coated and uncoated		
	3	Various modified tablets- sustained release		
10th		1st Sessional Examination	10th	
11th	1	Extended, fast dissolving tablets	11th	To prepare and submit turpentine liniment
	2	Multilayered		
	3	Revision		
12th	1	Capsules- introduction	12th	To prepare effervescent powder granules
	2	Hard gelatin capsule		
	3	Soft gelatin capsules		
13th	1	Revision	13th	To prepare and submit simple dusting powder
	2	Liquid oral preparations- introduction		
	3	solutions		
14th	1	Syrups and elixirs	14th	To prepare and submit sterile injection of normal saline
	2	Emulsion		
	3	Suspensions		

15th	1	Dry powder for reconstitution	15th	To prepare and submit calcium gluconate injection
	2	Revision		
	3	Test		
16th	1	Topical preparation- intro and Ointment introduction	16th	To prepare and submit paracetamol tablet

	2	Ointment- types and bases		
	3	Creams		
17th	1	Paste	17th	To formulate and submit cold cream
	2	Gels		
	3	Liniments and lotion		
18th		2nd Sessional Examination		
19th	1	Suppositories	19th	To prepare and submit shampoo
	2	Pessaries		
	3	Nasal preparations		
20th	1	Eye preparations	20th	To prepare and submit lotion
	2	Powders and granules- introduction and insufflations		
	3	Dusting powders, effervescent powders		
21st	1	Effervescent granules	21st	To prepare and submit toothpaste
	2	Sterile formulations- introduction, injectables		
	3	Eye drops		
22nd	1	Eye ointments	22nd	To demonstrate various stages of tablet manufacturing processes
	2	Immunological products- Introduction		

	3	Sera and their manufacturing method		
23rd	1	Vaccines and their manufacturing method	23rd	To study the method of usage and storage of inhalers
	2	Toxoids and their manufacturing method		
	3	Assignments		
24th	1	Revision	24th	To study the method of usage and storage of spacers
	2	Quality control and assurance –definition, concepts		
	3	Current cGMP		
25th	1	Introduction to the concept of calibration	25th	To study the method of usage and storage of insulin pens
	2	Introduction to the concept of validation		
	3	Novel drug delivery systems-introduction,		
26th	1	Classification of NDDS	26th	To demonstrate quality control test and evaluation of tablets
	2	Advantages and challenges		
	3	Revision		
27th	1	Test	27th	To demonstrate quality control test and evaluation of capsules
	2	Revision		
	3	Revision		
28th		3rd Sessional Examination	28th	
29th	1,2,3	Revision	29th	To demonstrate quality control test and evaluation of emulsion
30th		Revision	29th	To demonstrate quality control test and evaluation of sterile injections