P.B.SIDDHARTHA COLLEGE OF ARTS & SCIENCE
DEPARTMENT OF CHEMISTRY
M.Sc – CHEMISTRY (ORGANIC CHEMISTRY)

II SEMESTER
W.E.F 2022-23 (R22 Regulations)

Title of the Paper: ANALYSIS OF DRUGS, FOODS, DAIRY PRODUCTS & BIOCHEMICAL ANALYSIS

Course Code	**22CH2E3**	Course Delivery Method	Class Room / Blended Mode - Both
Credits	**4**	CIA Marks	30
No. of Lecture Hours / Week	**4**	Semester End Exam Marks	70
Total Number of Lecture Hours	**60**	Total Marks	100
Year of Introduction:2017-2018	Year of Offering:	Year of Revision:----	Percentage of Revision: ---

S.No	COURSE OUTCOMES	PO`S
	After the completion of the course, Students will be able to	
1	Memorize the basic principles of analysis drugs. Food, dairy products and biological analysis.	2,7
2	Understand the basic and advanced concepts of drugs. Food, dairy products and biological analysis.	1,4,7
3	Apply the analysis of drugs, foods, dairy products and biological analysis in any chosen job role.	1,4,6
4	Interpret the role of the analysis of drugs, foods and biological analysis, quantitatively.	1,3,5

Syllabus

Unit	Learning Units	Lecture Hours
I	**Analysis of the following drugs and pharmaceuticals preparations:** (Knowledge of molecular formula, structure and analysis) Analysis of analgesics and antipyretics like aspirin and paracetamol Analysis of antimalerials like choloroquine. Analysis of drugs in the treatment of infections and infestations: Amoxycillin, chloramphenicol, metronidazole, penicillin, tetracycline. Anti tuberculous drug- isoniazid.	12
II	**Analysis of the following drugs and pharmaceuticals preparations**: (Knowledge of molecular formula, structure and analysis) Analysis of antihistamine drugs and sedatives like: allegra, zyrtec(citirizine), alprazolam, trazodone, lorazepem.	12
III	Analysis of anti epileptic and anti convulsant drugs like phenobarbital and phenacemide. Analysis of drugs used in case of cardiovascular drugs:atenolol, norvasc (amlodipine), Analysis of Lipitor (atorvastatin) a drug for the preventin of productin of cholesterol. Analysis of diuretics like: furosemide (Lasix), triamterene	12

	Analysis of prevacid (lansoprazole) a drug used for the prevention of production of acids in stomach.	
IV	**Analysis of Milk and Milk Products:** Acidity, total solids, fat, total nitrogen, protenines, lactose, phosphate activity, casein, chloride Analysis of food materials. **Preservatives:** Sodium carbonate, sodium benzoate sorbic acid Flavoring agents - Vanilla, diacetyl, isoamyl acetate, limonene, ethylpropionate, allyl hexanoate and Adulterants in rice and wheat, wheat flour, sago, coconut oil, coffee powder, tea powder, milk.	12
V	**Clinical Analysis of Blood:** Composition of blood, clinical analysis, trace elements in the body.Estimation of blood chlolesterol, glucose, enzymes, RBC & WBC, Blood gas analyser.	12

Reference Books:

1) F.J.Welcher-Standard methods of analysis,
2) A.I.Vogel-A text book of quantitative Inorganic analysis-ELBS,
3) F.D.Snell & F.M.Biffen-Commercial methods of analysis-D.B.Taraporavala & sons,
4) J.J.Elving and I.M.Kolthoff- Chemical analysis - A series of monographs on
5) Analytical chemistry and its applications -- Inter Science- Vol I to VII.,
6) Aanalytical Agricultrual Chemistry by S.L.Chopra & J.S.Kanwar - Kalyani Publishers
7) Quantitative analysis of drugs in pharmaceutical formulations by P.D.Sethi, CBS Publishers andDistributors, New Delhi.
8) G.Ingram- Methods of organic elemental micro analysis- Chapman and Hall.
9) H.Wincciam and Bobbles (Henry J)- Instrumental methods of analysis of food additives.,
10) H.Edward-The Chemical analysis of foods; Practical treatise on the examination of food stuffs andthe detection of adulterants,
11) The quantitative analysis of drugs- D.C.Garratt-Chapman & Hall,
12) A text book of pharmaceutical analysis by K.A.Connors-Wiley- International,
12.Comprehensivemedicinal chemistry-Ed Corwin Hansch Vol 5,Pergamon Press.

M.Sc. DEGREE EXAMINATION
SECOND SEMESTER

Elective Paper:: **Analysis of Drugs, Foods, Dairy Products & Biochemical Analysis**
Course Code : 22CH2E3

Time: 3 hours ***Maximum Marks: 70***

SECTION – A **(5x4M=20M)**

1 (a). Discuss the analysis of Aspirin. (CO-2, L-2)

(Or)

(b). Explain the analysis of Paracetamol. (CO-2, L-2)

2 (a). Discuss the analysis of Allegra. (CO-2, L-2)

(Or)

(b). Explain the analysis of Citrizine. (CO-2, L-2)

3(a). Discuss the analysis of Phenobarbital. (CO-2, L-2)

(Or)

(b). Explain the phenacemide. (CO-2, L-2)

4(a). Discuss the acidity of milk shortly. (CO-2, L-2)

(Or)

(b). Explain the total solid fat of milk. (CO-2, L-2)

5 (a). Discuss the composition of blood. (CO-2, L-2)

(Or)

(b). Explain the chemical analysis of blood. (CO-2, L-2)

SECTION – B **(5x10M=50M)**

UNIT - I

6.(a) Discuss the analysis of (i) choloroquine and (ii) Amoxycillin (CO-2, L-2)

(Or)

(b) Explain the analysis of chloramphenicol and metronidazole. (CO-2, L-2)

UNIT – II

7.(a) Discuss the analysis of alprazolam and trazodone. (CO-3, L-3)

(Or)

(b) Explain the analysis of lorazepem. (CO-3, L-3)

UNIT - III

8.(a) Discuss the analysis of atenolol and norvasc. (CO-2, L-2)

(Or)

(b) Explain the analysis of Lipitor and Furosemide in detail. (CO-2, L -2)

UNIT – IV

9.(a) Discuss the analysis of protenines and lactose. (CO-2, L-2)

(Or)

(b) Explain the analysis of phosphate activity and chloride analysis of food materials. (CO-2, L-2)

UNIT - V

10.(a) Give an account of chemical estimation of blood glucose. (CO-2, L-2)

(Or)

(b) Discuss in detail estimation of blood cholesterol in detail. (CO-2, L-2)