

Criterion 1 – Curricular Aspects
Key Indicator- 1.3 Curriculum Enrichment

1.3.2: Percentage of students undertaking project work/field work/ internships

PREAMBLE

Additional Data:

**B. Pharm Practical
Related Subject**
Semester I to Semester
VIII

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**Institutional Drug
Information and
Counselling Centre
(IDICC)**

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Rajarshi Shahu
College of Pharmacy

Journey Towards Academic Excellence

B. Pharm Practical Related Subjects

B. Pharm (BPH) Practical Related Subjects

SEMESTER I

1. BP 107P. HUMAN ANATOMY AND PHYSIOLOGY (Practical) 4 Hours/week

Practical physiology is complimentary to the theoretical discussions in physiology. Practicals allow the verification of physiological processes discussed in theory classes through experiments on living tissue, intact animals or normal human beings. This is helpful for developing an insight on the subject.

1. Study of compound microscope.
2. Microscopic study of epithelial and connective tissue
3. Microscopic study of muscular and nervous tissue
4. Identification of axial bones
5. Identification of appendicular bones
6. Introduction to hemocytometry.
7. Enumeration of white blood cell (WBC) count
8. Enumeration of total red blood corpuscles (RBC) count
9. Determination of bleeding time
10. Determination of clotting time
11. Estimation of hemoglobin content
12. Determination of blood group.
13. Determination of erythrocyte sedimentation rate (ESR).
14. Determination of heart rate and pulse rate.
15. Recording of blood pressure.

Recommended Books (Latest Editions)

1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
2. Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
3. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA
4. Text book of Medical Physiology- Arthur C, Guyton and John.E. Hall Miamisburg, OH,



U.S.A.

5. Principles of Anatomy and Physiology by Tortora Grabowski. Palmetto, GA, U.S.A.

316. Textbook of Human Histology by Inderbir Singh, Jaypee brother's medical publishers, New Delhi.

7. Textbook of Practical Physiology by C.L. Ghai, Jaypee brother's medical publishers, New Delhi.

8. Practical workbook of Human Physiology by K. Srinageswari and Rajeev Sharma, Jaypee brother's medical publishers, New Delhi.

Reference Books (Latest Editions)

1. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA

2. Text book of Medical Physiology- Arthur C, Guyton and John. E. Hall. Miamisburg, OH, U.S.A.

3. Human Physiology (vol 1 and 2) by Dr. C.C. Chatterrje ,Academic Publishers Kolkata

2. BP 108P. PHARMACEUTICAL ANALYSIS (Practical) 4 Hours / Week

I Test of the following

(1) Chloride

(2) Sulphate

(3) Iron

(4) Arsenic

II Preparation and standardization of

(1) Sodium hydroxide

(2) Sulphuric acid

(3) Sodium thiosulfate

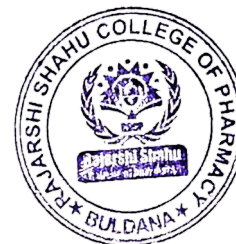
(4) Potassium permanganate

(5) Ceric ammonium sulphate

III Assay of the following compounds along with Standardization of Titrant

(1) Ammonium chloride by acid base titration

(2) Ferrous sulphate by Cerimetry



- (3) Copper sulphate by Iodometry
- (4) Calcium gluconate by complexometry
- (5) Hydrogen peroxide by Permanganometry
- (6) Sodium benzoate by non-aqueous titration
- (7) Sodium Chloride by precipitation titration

IV Determination of Normality by electro-analytical methods

- (1) Conductometric titration of strong acid against strong base
- (2) Conductometric titration of strong acid and weak acid against strong base
- (3) Potentiometric titration of strong acid against strong base

Recommended Books: (Latest Editions)

1. A.H. Beckett & J.B. Stenlake's, Practical Pharmaceutical Chemistry Vol I & II, Stahlone Press of University of London
2. A.I. Vogel, Text Book of Quantitative Inorganic analysis
3. P. Gundu Rao, Inorganic Pharmaceutical Chemistry
4. Bentley and Driver's Textbook of Pharmaceutical Chemistry
5. John H. Kennedy, Analytical chemistry principles
6. Indian Pharmacopoeia.

3. BP 109P. PHARMACEUTICSI (Practical) 3 Hours / week

1 . Syrups

- a) Syrup IP'66
- b) Compound syrup of Ferrous Phosphate BPC'68

2. Elixirs

- a) Piperazine citrate elixir
- b) Paracetamol pediatric elixir

3. Linctus

- a) Terpin Hydrate Linctus IP'66

4. Solutions

- b) Iodine Throat Paint (Mandles Paint)
- a) Strong solution of ammonium acetate



- b) Cresol with soap solution
- c) Lugol's solution

5. Suspensions

- a) Calamine lotion
- b) Magnesium Hydroxide mixture
- c) Aluminium Hydroxide gel

6. Emulsions a) Turpentine Liniment

- b) Liquid paraffin emulsion

7. Powders and Granules

- a) ORS powder (WHO)
- b) Effervescent granules
- c) Dusting powder
- d) Divided powders

8. Suppositories

- a) Glycero gelatin suppository
- b) Cocoa butter suppository
- c) Zinc Oxide suppository

8. Semisolids

- a) Sulphur ointment
- b) Non staining-iodine ointment with methyl salicylate
- c) Carbopal gel

9. Gargles and Mouthwashes

- a) Iodine gargle
- b) Chlorhexidine mouthwash

Recommended Books: (Latest Editions)

381. H.C. Ansel et al., Pharmaceutical Dosage Form and Drug Delivery System, Lippincott Williams and Walkins, New Delhi.
2. Carter S.J., Cooper and Gunn's-Dispensing for Pharmaceutical Students, CBS publishers, New Delhi.
3. M.E. Aulton, Pharmaceutics, The Science & Dosage Form Design, Churchill Livingstone, Edinburgh.



4. Indian pharmacopoeia.
5. British pharmacopoeia.
6. Lachmann. Theory and Practice of Industrial Pharmacy, Lea & Febiger Publisher, The University of Michigan.
7. Alfonso R. Gennaro Remington. The Science and Practice of Pharmacy, Lippincott Williams, New Delhi.
8. Carter S.J., Cooper and Gunn's. Tutorial Pharmacy, CBS Publications, New Delhi.
9. E.A. Rawlins, Bentley's Text Book of Pharmaceutics, English Language Book Society, Elsevier Health Sciences, USA.
10. Isaac Ghebre Sellassie: Pharmaceutical Pelletization Technology, Marcel Dekker, INC, New York.
11. Dilip M. Parikh: Handbook of Pharmaceutical Granulation Technology, Marcel Dekker, INC, New York.
12. Francoise Nieloud and Gilberte Marti-Mestres: Pharmaceutical Emulsions and Suspensions, Marcel Dekker, INC, New York

4. BP 110P. PHARMACEUTICAL INORGANIC CHEMISTRY (Practical) 4 Hours / Week

I Limit tests for following ions

Limit test for Chlorides and Sulphates

Modified limit test for Chlorides and Sulphates

Limit test for Iron

Limit test for Heavy metals

Limit test for Lead

Limit test for Arsenic

II Identification test

Magnesium hydroxide

Ferrous sulphate

Sodium bicarbonate

Calcium gluconate



Copper sulphate

III Test for purity

Swelling power of Bentonite

Neutralizing capacity of aluminum hydroxide gel

Determination of potassium iodate and iodine in potassium Iodide

IV Preparation of inorganic pharmaceuticals

Boric acid

Potash alum

Ferrous sulphate

Recommended Books (Latest Editions)

1. A.H. Beckett & J.B. Stenlake's, Practical Pharmaceutical Chemistry Vol I & II, Stahlone Press of University of London, 4th edition.
2. A.I. Vogel, Text Book of Quantitative Inorganic analysis
3. P. Gundu Rao, Inorganic Pharmaceutical Chemistry, 3rd Edition
4. M.L Schroff, Inorganic Pharmaceutical Chemistry
5. Bentley and Driver's Textbook of Pharmaceutical Chemistry
6. Anand & Chatwal, Inorganic Pharmaceutical Chemistry
7. Indian Pharmacopoeia

5. BP 111P. COMMUNICATION SKILLS (Practical) 2 Hours / week

The following learning modules are to be conducted using words worth® English language lab software

Basic communication covering the following topics

Meeting People

Asking Questions

Making Friends

What did you do?

Do's and Dont's

Pronunciations covering the following topics

Pronunciation (Consonant Sounds)

Pronunciation and Nouns



Pronunciation (Vowel Sounds)

Advanced Learning

Listening Comprehension / Direct and Indirect Speech

Figures of Speech

Effective Communication

Writing Skills

Effective Writing

Interview Handling Skills

E-Mail etiquette

Presentation Skills

Recommended Books: (Latest Edition)

1. Basic communication skills for Technology, Andreja. J. Ruther Ford, 2nd Edition, Pearson Education, 2011
2. Communication skills, Sanjay Kumar, Pushpalata, 1stEdition, Oxford Press, 2011
3. Organizational Behaviour, Stephen .P. Robbins, 1stEdition, Pearson, 2013
4. Brilliant- Communication skills, Gill Hasson, 1stEdition, Pearson Life, 2011
5. The Ace of Soft Skills: Attitude, Communication and Etiquette for success, Gopala Swamy Ramesh, 5thEdition, Pearson, 2013
6. Developing your influencing skills, Deborah Dalley, Lois Burton, Margaret, Green hall, 1st Edition Universe of Learning LTD, 2010
7. Communication skills for professionals, Konar nira, 2 ndEdition, New arrivals – PHI, 2011
8. Personality development and soft skills, Barun K Mitra, 1stEdition, Oxford Press, 2011
9. Soft skill for everyone, Butter Field, 1st Edition, Cengage Learning india pvt.ltd, 2011
10. Soft skills and professional communication, Francis Peters SJ, 1stEdition, Mc Graw Hill Education, 2011
11. Effective communication, John Adair, 4thEdition, Pan Mac Millan,2009
12. Bringing out the best in people, Aubrey Daniels, 2 ndEdition, Mc Graw Hill, 1999

6. BP 112 RBP. REMEDIAL BIOLOGY (Practical)

30 Hours

1. Introduction to experiments in biology
 - a) Study of Microscope



- b) Section cutting techniques
- c) Mounting and staining
- d) Permanent slide preparation
- 2. Study of cell and its inclusions
- 3. Study of Stem, Root, Leaf, seed, fruit, flower and their modifications
- 4. Detailed study of frog by using computer models
- 5. Microscopic study and identification of tissues pertinent to Stem, Root Leaf, seed, fruit and flower
- 6. Identification of bones
- 7. Determination of blood group
- 8. Determination of blood pressure
- 9. Determination of tidal volume

Reference Books

- 1. Practical human anatomy and physiology. by S.R.Kale and R.R.Kale.
- 2. A Manual of pharmaceutical biology practical by S.B.Gokhale, C.K.Kokate and S.P.Shriwastava.
- 3. Biology practical manual according to National core curriculum .Biology forum of Karnataka. Prof .M.J.H.Shafi

SEMESTER II

7. BP 207 P. HUMAN ANATOMY AND PHYSIOLOGY (Practical) 4 Hours/week

Practical physiology is complimentary to the theoretical discussions in physiology. Practicals allow the verification of physiological processes discussed in theory classes through experiments on living tissue, intact animals or normal human beings. This is helpful for developing an insight on the subject.

- 1. To study the integumentary and special senses using specimen, models, etc.,
- 2. To study the nervous system using specimen, models, etc.,
- 3. To study the endocrine system using specimen, models, etc
- 4. To demonstrate the general neurological examination



5. To demonstrate the function of olfactory nerve
6. To examine the different types of taste.
7. To demonstrate the visual acuity
8. To demonstrate the reflex activity
9. Recording of body temperature
10. To demonstrate positive and negative feedback mechanism.
11. Determination of tidal volume and vital capacity.
12. Study of digestive, respiratory, cardiovascular systems, urinary and reproductive systems with the help of models, charts and specimens.
13. Recording of basal mass index
14. Study of family planning devices and pregnancy diagnosis test.
15. Demonstration of total blood count by cell analyser
16. Permanent slides of vital organs and gonads.

Recommended Books (Latest Editions)

1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
2. Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
3. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA
- 4.564. Text book of Medical Physiology- Arthur C, Guyton and John.E. Hall. Miamisburg, OH, U.S.A.
5. Principles of Anatomy and Physiology by Tortora Grabowski. Palmetto, GA, U.S.A.
6. Textbook of Human Histology by Inderbir Singh, Jaypee brothers medical publishers, New Delhi.
7. Textbook of Practical Physiology by C.L. Ghai, Jaypee brothers medical publishers, New Delhi.
8. Practical workbook of Human Physiology by K. Srinageswari and Rajeev Sharma, Jaypee brother's medical publishers, New Delhi.

Reference Books:



1. Physiological basis of Medical Practice-Best and Taylor. Williams & Wilkins Co, Riverview, MI USA
2. Text book of Medical Physiology- Arthur C, Guyton and John. E. Hall. Miamisburg, OH, U.S.A.
3. Human Physiology (vol 1 and 2) by Dr. C.C. Chatterrje ,Academic Publishers Kolkata

8. BP 208P. PHARMACEUTICAL ORGANIC CHEMISTRY -I (Practical) 4 Hours / week

1. Systematic qualitative analysis of unknown organic compounds like

1. Preliminary test: Color, odour, aliphatic/aromatic compounds, saturation and unsaturation, etc.
2. Detection of elements like Nitrogen, Sulphur and Halogen by Lassaigne's test
3. Solubility test
4. Functional group test like Phenols, Amides/ Urea, Carbohydrates, Amines, Carboxylic acids, Aldehydes and Ketones, Alcohols, Esters, Aromatic and Halogenated Hydrocarbons, Nitro compounds and Anilides.
5. Melting point/Boiling point of organic compounds
6. Identification of the unknown compound from the literature using melting point/ boiling point.
7. Preparation of the derivatives and confirmation of the unknown compound by melting point/ boiling point.
8. Minimum 5 unknown organic compounds to be analysed systematically.

2. Preparation of suitable solid derivatives from organic compounds

3. Construction of molecular models

Recommended Books (Latest Editions)

1. Organic Chemistry by Morrison and Boyd
2. Organic Chemistry by I.L. Finar , Volume-I
3. Textbook of Organic Chemistry by B.S. Bahl & Arun Bahl.
4. Organic Chemistry by P.L.Soni
5. Practical Organic Chemistry by Mann and Saunders.
6. Vogel's text book of Practical Organic Chemistry
7. Advanced Practical organic chemistry by N.K.Vishnoi.
8. Introduction to Organic Laboratory techniques by Pavia, Lampman and Kriz.
9. Reaction and reaction mechanism by Ahluwaliah/Chatwal.



9. BP 209P. BIOCHEMISTRY (Practical) 4 Hours / Week

1. Qualitative analysis of carbohydrates (Glucose, Fructose, Lactose, Maltose, Sucrose and starch)
2. Identification tests for Proteins (albumin and Casein)
3. Quantitative analysis of reducing sugars (DNSA method) and Proteins (Biuret method)
4. Qualitative analysis of urine for abnormal constituents
5. Determination of blood creatinine
6. Determination of blood sugar
7. Determination of serum total cholesterol
8. Preparation of buffer solution and measurement of pH
9. Study of enzymatic hydrolysis of starch
10. Determination of Salivary amylase activity
11. Study the effect of Temperature on Salivary amylase activity.
12. Study the effect of substrate concentration on salivary amylase activity.

Recommended Books (Latest Editions)

1. Principles of Biochemistry by Lehninger.
2. Harper's Biochemistry by Robert K. Murry, Daryl K. Granner and Victor W. Rodwell.
3. Biochemistry by Stryer.
4. Biochemistry by D. Satyanarayan and U.Chakrapani
5. Textbook of Biochemistry by Rama Rao.
6. Textbook of Biochemistry by Deb.
7. Outlines of Biochemistry by Conn and Stumpf



8. Practical Biochemistry by R.C. Gupta and S. Bhargavan.
9. Introduction of Practical Biochemistry by David T. Plummer. (3rd Edition)
10. Practical Biochemistry for Medical students by Rajagopal and Ramakrishna.
11. Practical Biochemistry by Harold Varley.

10. BP 210P. COMPUTER APPLICATIONS IN PHARMACY (Practical)

1. Design a questionnaire using a word processing package to gather information about a particular disease.
2. A HTML web page to show personal information.
3. Retrieve the information of a drug and its adverse effects using online tools
4. Creating mailing labels Using Label Wizard , generating label in MS WORD
5. Create a database in MS Access to store the patient information with the required fields Using access
6. Design a form in MS Access to view, add, delete and modify the patient record in the database
7. Generating report and printing the report from patient database
8. Creating invoice table using – MS Access
9. Drug information storage and retrieval using MS Access
10. Creating and working with queries in MS Access
11. Exporting Tables, Queries, Forms and Reports to web pages
12. Exporting Tables, Queries, Forms and Reports to XML pages

Recommended books (Latest edition):

1. Computer Application in Pharmacy – William E.Fassett –Lea and Febiger, 600 South Washington Square, USA, (215) 922-1330.
2. Computer Application in Pharmaceutical Research and Development –Sean Ekins – Wiley-Interscience, A John Willey and Sons, INC., Publication, USA
3. Bioinformatics (Concept, Skills and Applications) – S.C.Rastogi-CBS Publishers an Distributors, 4596/1- A, 11 Darya Gani, New Delhi – 110 002(INDIA)



4. Microsoft office Access - 2003, Application Development Using VBA, SQL Server, DAP and Infopath – Cary N.Prague – Wiley Dreamtech India (P) Ltd., 4435/7, Ansari Road, Daryagani, New Delhi – 110002

SEMESTER III

11. BP 305P. PHARMACEUTICAL ORGANIC CHEMISTRY -II (Practical) 4 Hrs/week

I Experiments involving laboratory techniques

- Recrystallization
- Steam distillation

II Determination of following oil values (including standardization of reagents)

- Acid value
- Saponification value
- Iodine value

III Preparation of compounds

- Benzanilide/Phenyl benzoate/Acetanilide from Aniline/ Phenol /Aniline by acylation reaction.
- 2,4,6-Tribromo aniline/Para bromo acetanilide from Aniline/
- Acetanilide by halogenation (Bromination) reaction.
- 5-Nitro salicylic acid/Meta di nitro benzene from Salicylic acid / Nitro benzene by nitration reaction.
- Benzoic acid from Benzyl chloride by oxidation reaction.
- Benzoic acid/ Salicylic acid from alkyl benzoate/ alkyl salicylate by hydrolysis reaction.
- 1-Phenyl azo-2-naphthol from Aniline by diazotization and coupling reactions.
- Benzil from Benzoin by oxidation reaction.
- Dibenzal acetone from Benzaldehyde by Claisen Schmidt reaction
- Cinnamic acid from Benzaldehyde by Perkin reaction
- P*-Iodo benzoic acid from *P*-amino benzoic acid

Recommended Books (Latest Editions)

1. Organic Chemistry by Morrison and Boyd



2. Organic Chemistry by I.L. Finar , Volume-I
3. Textbook of Organic Chemistry by B.S. Bahl & Arun Bahl.
4. Organic Chemistry by P.L.Soni
5. Practical Organic Chemistry by Mann and Saunders.
6. Vogel's text book of Practical Organic Chemistry
7. Advanced Practical organic chemistry by N.K.Vishnoi.
8. Introduction to Organic Laboratory techniques by Pavia, Lampman and Kriz.

12. BP 306P. PHYSICAL PHARMACEUTICS – I (Practical) 4 Hrs/week

1. Determination the solubility of drug at room temperature
2. Determination of pKa value by Half Neutralization/ Henderson Hasselbalch equation.
3. Determination of Partition co- efficient of benzoic acid in benzene and water
4. Determination of Partition co- efficient of Iodine in CCl₄ and water
5. Determination of % composition of NaCl in a solution using phenol-water system by CST method
6. Determination of surface tension of given liquids by drop count and drop weight method
7. Determination of HLB number of a surfactant by saponification method
8. Determination of Freundlich and Langmuir constants using activated char coal
9. Determination of critical micellar concentration of surfactants
10. Determination of stability constant and donor acceptor ratio of PABA-Caffeine complex by solubility method
11. Determination of stability constant and donor acceptor ratio of Cupric-Glycine complex by pH titration method

Recommended Books: (Latest Editions)

1. Physical Pharmacy by Alfred Martin
2. Experimental Pharmaceutics by Eugene, Parott.
3. Tutorial Pharmacy by Cooper and Gunn.
4. Stocklosam J. Pharmaceutical Calculations, Lea &Febiger, Philadelphia.
5. Liberman H.A, Lachman C., Pharmaceutical Dosage forms, Tablets, Volume-1 to 3, MarcelDekkar Inc.
6. Liberman H.A, Lachman C, Pharmaceutical Dosage forms. Disperse



systems, volume 1, 2, 3. Marcel Dekkar Inc.

7. Physical Pharmaceutics by Ramasamy C and ManavalanR.
8. Laboratory Manual of Physical Pharmaceutics, C.V.S. Subramanyam, J. Thimma settee
9. Physical Pharmaceutics by C.V.S. Subramanyam
10. Test book of Physical Phramacy, by Gaurav Jain & Roop K. Khar

13. BP 307P. PHARMACEUTICAL MICROBIOLOGY (Practical) 4 Hrs/week

1. Introduction and study of different equipments and processing, e.g., B.O.D. incubator, laminar flow, aseptic hood, autoclave, hot air sterilizer, deep freezer, refrigerator, microscopes used in experimental microbiology.
2. Sterilization of glassware, preparation and sterilization of media.
3. Sub culturing of bacteria and fungus. Nutrient stabs and slants preparations.
4. Staining methods- Simple, Grams staining and acid fast staining (Demonstration with practical).
5. Isolation of pure culture of micro-organisms by multiple streak plate technique and other techniques.
6. Microbiological assay of antibiotics by cup plate method and other methods
7. Motility determination by Hanging drop method.
8. Sterility testing of pharmaceuticals.
9. Bacteriological analysis of water
10. Biochemical test.

Recommended Books (Latest edition)

1. W.B. Hugo and A.D. Russel: Pharmaceutical Microbiology, Blackwell Scientific publications, Oxford London.
2. Prescott and Dunn., Industrial Microbiology, 4th edition, CBS Publishers & DistributorsDelhi.
3. Pelczar, Chan Kreig, Microbiology, Tata McGraw Hill edn.
4. Malcolm Harris, Balliere Tindall and Cox: Pharmaceutical Microbiology.
5. Rose: Industrial Microbiology.
6. Probisher, Hinsdill et al: Fundamentals of Microbiology, 9th ed. Japan
7. Cooper and Gunn's: Tutorial Pharmacy, CBS Publisher and Distribution.
8. Pepler: Microbial Technology.



9. I.P., B.P., U.S.P.- latest editions.
10. Ananthnarayan : Text Book of Microbiology, Orient-Longman, Chennai
11. Edward: Fundamentals of Microbiology.
12. N.K.Jain: Pharmaceutical Microbiology, Vallabh Prakashan, Delhi
13. Bergeys manual of systematic bacteriology, Williams and Wilkins- A Waverly company

14. BP 308P. PHARMACEUTICAL ENGINEERING (Practical) 4 Hours/week

- I. Determination of radiation constant of brass, iron, unpainted and painted glass.
- II. Steam distillation – To calculate the efficiency of steam distillation.
- III. To determine the overall heat transfer coefficient by heat exchanger.
- IV. Construction of drying curves (for calcium carbonate and starch).
- V. Determination of moisture content and loss on drying.
- VI. Determination of humidity of air – i) From wet and dry bulb temperatures –use of Dew point method.
- VII. Description of Construction working and application of Pharmaceutical Machinery such as rotary tablet machine, fluidized bed coater, fluid energy mill, de humidifier.
- VIII. Size analysis by sieving – To evaluate size distribution of tablet granulations –Construction of various size frequency curves including arithmetic and logarithmic probability plots.
- IX. Size reduction: To verify the laws of size reduction using ball mill and determining Kicks, Rittinger's, Bond's coefficients, power requirement and critical speed of Ball Mill.
- X. Demonstration of colloid mill, planetary mixer, fluidized bed dryer, freeze dryer and such other major equipment.
- XI. Factors affecting Rate of Filtration and Evaporation (Surface area, Concentration and Thickness/ viscosity
- XII. To study the effect of time on the Rate of Crystallization.
- XIII. To calculate the uniformity Index for given sample by using Double Cone Blender



SEMESTER IV

15. BP 406P. MEDICINAL CHEMISTRY – I (Practical) 4 Hours/Week

I Preparation of drugs/ intermediates

- 1 1,3-pyrazole
- 2 1,3-oxazole
- 3 Benzimidazole
- 4 Benztriazole
- 5 2,3- diphenyl quinoxaline
- 6 Benzocaine
- 7 Phenytoin
- 8 Phenothiazine
- 9 Barbiturate

II Assay of drugs

- 1 Chlorpromazine
- 2 Phenobarbitone
- 3 Atropine
- 4 Ibuprofen
- 5 Aspirin
- 6 Furosemide

III Determination of Partition coefficient for any two drugs

Recommended Books (Latest Editions)

1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
2. Foye's Principles of Medicinal Chemistry.



3. Burger's Medicinal Chemistry, Vol I to IV.
4. Introduction to principles of drug design- Smith and Williams.
5. Remington's Pharmaceutical Sciences.
6. Martindale's extra pharmacopoeia.
937. Organic Chemistry by I.L. Finar, Vol. II.
8. The Organic Chemistry of Drug Synthesis by Lednicer, Vol. 1-5.
9. Indian Pharmacopoeia.
10. Text book of practical organic chemistry- A.I.Vogel.

16. BP 407P. PHYSICAL PHARMACEUTICS- II (Practical) 3 Hrs/week

1. Determination of particle size, particle size distribution using sieving method
2. Determination of particle size, particle size distribution using Microscopic method
3. Determination of bulk density, true density and porosity
4. Determine the angle of repose and influence of lubricant on angle of repose
5. Determination of viscosity of liquid using Ostwald's viscometer
6. Determination sedimentation volume with effect of different suspending agent
7. Determination sedimentation volume with effect of different concentration of single suspending agent
8. Determination of viscosity of semisolid by using Brookfield viscometer
9. Determination of reaction rate constant first order.
10. Determination of reaction rate constant second order
11. Accelerated stability studies

Recommended Books: (Latest Editions)

1. Physical Pharmacy by Alfred Martin, Sixth edition
2. Experimental pharmaceutics by Eugene, Parott.
3. Tutorial pharmacy by Cooper and Gunn.
4. Stocklosam J. Pharmaceutical calculations, Lea & Febiger, Philadelphia.
5. Liberman H.A, Lachman C., Pharmaceutical Dosage forms, Tablets, Volume-1 to 3,



Marcel Dekkar Inc.

6. Liberman H.A, Lachman C, Pharmaceutical dosage forms. Disperse systems, volume 1, 2, 3. Marcel Dekkar Inc.
7. Physical Pharmaceutics by Ramasamy C, and Manavalan R.

17. BP 408P. PHARMACOLOGY-I (Practical) 4Hrs/Week

1. Introduction to experimental pharmacology.
2. Commonly used instruments in experimental pharmacology.
3. Study of common laboratory animals.
4. Maintenance of laboratory animals as per CPCSEA guidelines.
5. Common laboratory techniques. Blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal studies.
6. Study of different routes of drugs administration in mice/rats.
7. Study of effect of hepatic microsomal enzyme inducers on the phenobarbitone sleeping time in mice.
8. Effect of drugs on ciliary motility of frog oesophagus
9. Effect of drugs on rabbit eye.
10. Effects of skeletal muscle relaxants using rota-rod apparatus.
11. Effect of drugs on locomotor activity using actophotometer.
12. Anticonvulsant effect of drugs by MES and PTZ method.
13. Study of stereotype and anti-catatonic activity of drugs on rats/mice.
14. Study of anxiolytic activity of drugs using rats/mice.
15. Study of local anesthetics by different methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchill Livingstone Elsevier
2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill



3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics
4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins
5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews- Pharmacology
6. K.D.Tripathi. Essentials of Medical Pharmacology, JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher
8. Modern Pharmacology with clinical Applications, by Charles R.Craig & Robert,
9. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata.
10. Kulkarni SK. Handbook of experimental pharmacology. VallabhPrakashan,

**18. BP 408P. PHARMACOGNOSY AND PHYTOCHEMISTRY I(Practical) 4
Hours/Week**

1. Analysis of crude drugs by chemical tests: (i) Tragacanth (ii) Acacia (iii) Agar (iv) Gelatin (v) starch (vi) Honey (vii) Castor oil
2. Determination of stomatal number and index
3. Determination of vein islet number, vein islet termination and palisade ratio.
4. Determination of size of starch grains, calcium oxalate crystals by eye piece micrometer
5. Determination of Fiber length and width
6. Determination of number of starch grains by Lycopodium spore method
7. Determination of Ash value
8. Determination of Extractive values of crude drugs
9. Determination of moisture content of crude drugs
10. Determination of swelling index and foaming

Recommended Books: (Latest Editions)

1. W.C.Evans, Trease and Evans Pharmacognosy, 16th edition, W.B. Saunders & Co., London, 2009.
2. Tyler, V.E., Brady, L.R. and Robbers, J.E., Pharmacognosy, 9th Edn., Lea and Febiger, Philadelphia, 1988.
3. Text Book of Pharmacognosy by T.E. Wallis



4. Mohammad Ali. Pharmacognosy and Phytochemistry, CBS Publishers & Distribution, New Delhi.
5. Text book of Pharmacognosy by C.K. Kokate, Purohit, Gokhlae (2007), 37th Edition, Nirali Prakashan, New Delhi.
6. Herbal drug industry by R.D. Choudhary (1996), 1st Edn, Eastern Publisher, New Delhi.
7. Essentials of Pharmacognosy, Dr.SH.Ansari, 2nd edition, Birla publications, New Delhi, 2007
8. Practical Pharmacognosy: C.K. Kokate, Purohit, Gokhlae
9. Anatomy of Crude Drugs by M.A. Iyengar

SEMESTER V

19. BP 506P. Industrial PharmacyI (Practical) 4 Hours/week

1. Preformulation studies on paracetamol/asparin/or any other drug
2. Preparation and evaluation of Paracetamol tablets
3. Preparation and evaluation of Aspirin tablets
4. Coating of tablets- film coating of tables/granules
5. Preparation and evaluation of Tetracycline capsules
6. Preparation of Calcium Gluconate injection
7. Preparation of Ascorbic Acid injection
8. Qulaity control test of (as per IP) marketed tablets and capsules
9. Preparation of Eye drops/ and Eye ointments
10. Preparation of Creams (cold / vanishing cream)
11. Evaluation of Glass containers (as per IP)

Recommended Books: (Latest Editions)

1. Pharmaceutical dosage forms - Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman & J.B.Schwartz
2. Pharmaceutical dosage form - Parenteral medication vol- 1&2 by Liberman & Lachman
3. Pharmaceutical dosage form disperse system VOL-1 by Liberman & Lachman
4. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
5. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)



6. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
7. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
8. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea &Febiger, Philadelphia, 5thedition, 2005
9. Drug stability - Principles and practice by Cartensen & C.J. Rhodes, 3rd Edition, Marcel Dekker Series, Vol 107

20. BP 507P. PHARMACOLOGY-II (Practical) 4Hrs/Week

1. Introduction to *in-vitro* pharmacology and physiological salt solutions.
2. Effect of drugs on isolated frog heart.
3. Effect of drugs on blood pressure and heart rate of dog.
4. Study of diuretic activity of drugs using rats/mice.
5. DRC of acetylcholine using frog rectus abdominis muscle.
6. Effect of physostigmine and atropine on DRC of acetylcholine using frog rectus abdominis muscle and rat ileum respectively.
7. Bioassay of histamine using guinea pig ileum by matching method.
8. Bioassay of oxytocin using rat uterine horn by interpolation method.
9. Bioassay of serotonin using rat fundus strip by three-point bioassay.
10. Bioassay of acetylcholine using rat ileum/colon by four-point bioassay.
11. Determination of PA₂ value of prazosin using rat anococcygeus muscle (by Schilds plot method).
12. Determination of PD₂ value using guinea pig ileum.
13. Effect of spasmogens and spasmolytics using rabbit jejunum.
14. Anti-inflammatory activity of drugs using carrageenan induced paw-edema model.
15. Analgesic activity of drug using central and peripheral methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchill Livingstone Elsevier



2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.
3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics
4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins.
5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews- Pharmacology.
6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher
8. Modern Pharmacology with clinical Applications, by Charles R.Craig & Robert.
9. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata.
10. Kulkarni SK. Handbook of experimental pharmacology. Vallabh Prakashan

21. BP 508P. PHARMACOGNOSY AND PHYTOCHEMISTRYII(Practical) 4 Hours/Week

1. Morphology, histology and powder characteristics & extraction & detection of: Cinchona, Cinnamon, Senna, Clove, Ephedra, Fennel and Coriander
2. Exercise involving isolation & detection of active principles
 - a. Caffeine - from tea dust.
 - b. Diosgenin from Dioscorea
 - c. Atropine from Belladonna
 - d. Sennosides from Senna
3. Separation of sugars by Paper chromatography
4. TLC of herbal extract
5. Distillation of volatile oils and detection of phytoconstitents by TLC



6. Analysis of crude drugs by chemical tests: (i) Asafoetida (ii) Benzoin (iii) Colophony (iv) Aloes (v) Myrrh

Recommended Books: (Latest Editions)

1. W.C.Evans, Trease and Evans Pharmacognosy, 16th edition, W.B. Saunders & Co., London, 2009.
2. Mohammad Ali. Pharmacognosy and Phytochemistry, CBS Publishers & Distribution, New Delhi.
3. Text book of Pharmacognosy by C.K. Kokate, Purohit, Gokhlae (2007), 37th Edition, Nirali Prakashan, New Delhi.
4. Herbal drug industry by R.D. Choudhary (1996), Ist Edn, Eastern Publisher, New Delhi.
5. Essentials of Pharmacognosy, Dr.SH.Ansari, IInd edition, Birla publications, New Delhi, 2007
6. Herbal Cosmetics by H.Pande, Asia Pacific Business press, Inc, New Delhi.
7. A.N. Kalia, Textbook of Industrial Pharmacognosy, CBS Publishers, New Delhi, 2005.
8. R Endress, Plant cell Biotechnology, Springer-Verlag, Berlin, 1994.
9. Pharmacognosy & Pharmacobiotechnology. James Bobbers, Marilyn KS, VE Tylor.
10. The formulation and preparation of cosmetic, fragrances and flavours.
11. Remington's Pharmaceutical sciences.
12. Text Book of Biotechnology by Vyas and Dixit.
13. Text Book of Biotechnology by R.C. Dubey.



SEMESTER VI

22. BP 607P. MEDICINAL CHEMISTRY- III (Practical) 4 Hours / week

I Preparation of drugs and intermediates

- 1 Sulphanilamide
- 2 7-Hydroxy, 4-methyl coumarin
- 3 Chlorobutanol
- 4 Triphenyl imidazole
- 5 Tolbutamide
- 6 Hexamine

II Assay of drugs

- 1 Isonicotinic acid hydrazide
- 2 Chloroquine
- 3 Metronidazole
- 4 Dapsone
- 5 Chlorpheniramine maleate
- 6 Benzyl penicillin

III Preparation of medicinally important compounds or intermediates by Microwave irradiation technique

IV Drawing structures and reactions using chem draw®

V Determination of physicochemical properties such as logP, clogP, MR, Molecular weight, Hydrogen bond donors and acceptors for class of drugs course content using drug design software Drug likeliness screening (Lipinskies RO5)

Recommended Books (Latest Editions)

1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
2. Foye's Principles of Medicinal Chemistry.
3. Burger's Medicinal Chemistry, Vol I to IV.
4. Introduction to principles of drug design- Smith and Williams.
5. Remington's Pharmaceutical Sciences.
6. Martindale's extra pharmacopoeia
7. Organic Chemistry by I.L. Finar, Vol. II.
8. The Organic Chemistry of Drug Synthesis by Lednicer, Vol. 1-5.



9. Indian Pharmacopoeia.
10. Text book of practical organic chemistry- A.I.Vogel.

23. BP 608P. PHARMACOLOGY-III (Practical) 4Hrs/Week

1. Dose calculation in pharmacological experiments
2. Antiallergic activity by mast cell stabilization assay
3. Study of anti-ulcer activity of a drug using pylorus ligand (SHAY) rat model and NSAIDS induced ulcer model.
4. Study of effect of drugs on gastrointestinal motility
5. Effect of agonist and antagonists on guinea pig ileum
6. Estimation of serum biochemical parameters by using semi- autoanalyser
7. Effect of saline purgative on frog intestine
8. Insulin hypoglycemic effect in rabbit
9. Test for pyrogens (Rabbit method)
10. Determination of acute oral toxicity (LD50) of a drug from a given data
11. Determination of acute skin irritation / corrosion of a test substance
12. Determination of acute eye irritation / corrosion of a test substance
13. Calculation of pharmacokinetic parameters from a given data
14. Biostatistics methods in experimental pharmacology (Student's t test, ANOVA)
15. Biostatistics methods in experimental pharmacology (Chi square test, Wilcoxon Signed Rank test)

**Experiments are demonstrated by simulated experiments/videos*

Recommended Books (Latest Editions)

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchill Livingstone Elsevier
2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill
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4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs. The Point Lippincott Williams & Wilkins



5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews- Pharmacology
6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher Modern Pharmacology with clinical Applications, by Charles R.Craig & Robert,
8. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata,
9. Kulkarni SK. Handbook of experimental pharmacology. VallabhPrakashan,
10. N.Udupa and P.D. Gupta, Concepts in Chronopharmacology.

24. BP 609P. HERBAL DRUG TECHNOLOGY (Practical) 4 hours/ week

1. To perform preliminary phytochemical screening of crude drugs.
2. Determination of the alcohol content of Asava and Arista
3. Evaluation of excipients of natural origin
4. Incorporation of prepared and standardized extract in cosmetic formulations like creams, lotions and shampoos and their evaluation.
5. Incorporation of prepared and standardized extract in formulations like syrups, mixtures and tablets and their evaluation as per Pharmacopoeial requirements.
6. Monograph analysis of herbal drugs from recent Pharmacopoeias
7. Determination of Aldehyde content
8. Determination of Phenol content
9. Determination of total alkaloids

Recommended Books: (Latest Editions)

1. Textbook of Pharmacognosy by Trease & Evans.
2. Textbook of Pharmacognosy by Tyler, Brady & Robber.
3. Pharmacognosy by Kokate, Purohit and Gokhale
4. Essential of Pharmacognosy by Dr.S.H.Ansari
5. Pharmacognosy & Phytochemistry by V.D.Rangari
6. Pharmacopoeal standards for Ayurvedic Formulation (Council of Research in Indian Medicine & Homeopathy)
7. Mukherjee, P.W. Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals. Business Horizons Publishers, New Delhi, India, 2002.



SEMESTER VII

24. BP705P. INSTRUMENTAL METHODS OF ANALYSIS (Practical) 4 Hours/Week

- 1 Determination of absorption maxima and effect of solvents on absorption maxima of organic compounds
- 2 Estimation of dextrose by colorimetry
- 3 Estimation of sulfanilamide by colorimetry
- 4 Simultaneous estimation of ibuprofen and paracetamol by UV spectroscopy
- 5 Assay of paracetamol by UV- Spectrophotometry
- 6 Estimation of quinine sulfate by fluorimetry
- 7 Study of quenching of fluorescence
- 8 Determination of sodium by flame photometry
- 9 Determination of potassium by flame photometry
- 10 Determination of chlorides and sulphates by nephelo turbidometry
- 11 Separation of amino acids by paper chromatography
- 12 Separation of sugars by thin layer chromatography
- 13 Separation of plant pigments by column chromatography
- 14 Demonstration experiment on HPLC
- 15 Demonstration experiment on Gas Chromatography

Recommended Books (Latest Editions)

1. Instrumental Methods of Chemical Analysis by B.K Sharma
2. Organic spectroscopy by Y.R Sharma
3. Text book of Pharmaceutical Analysis by Kenneth A. Connors
4. Vogel's Text book of Quantitative Chemical Analysis by A.I. Vogel
5. Practical Pharmaceutical Chemistry by A.H. Beckett and J.B. Stenlake
6. Organic Chemistry by I. L. Finar
7. Organic spectroscopy by William Kemp
8. Quantitative Analysis of Drugs by D. C. Garrett
9. Quantitative Analysis of Drugs in Pharmaceutical Formulations by P. D. Sethi
10. Spectrophotometric identification of Organic Compounds by Silverstein



SEMESTER VIII

Note: No Practical for Semester VIII





Rajarshi Shahu
College of Pharmacy

Journey Towards Academic Excellence

Institutional Drug Information and Counselling Centre (IDICC)



Institutional Drug Information and Counselling Center (IDICC)

Objectives:

1. To describe the evolution of drug information.
2. To define drug information and related terms.
3. To provide the information related drug, adverse drug reaction, drug interaction for safe use of drugs
4. To describe the importance of drug information to the Pharmacy practice.
5. To explain the need for drug information skills as a healthcare practitioner.
6. To describe the essential components needed to develop a drug information center.
7. To Counsel and make awareness about diseases among the patients.
8. To improve Rational Drug Therapy by counseling with patients.
9. To provide the vital information, advice and assistance to help you with your medications and to ensure you take them properly

Guidelines:

1. Secure demographic details of the requester.
2. Obtain background information.
3. Refine and categories the ultimate question.
4. Develop a strategy, conduct a search and perform evaluation of problem.
5. Formulate and provide a response.
6. Conduct follow-up and document the outcome.




Roles & Responsibilities:

1. To respond to enquiries on therapeutic drug use.
2. To offer a service to the public and health professionals.
3. To provide training to the graduate and undergraduate students.
4. To provide toxicology information to the public.
5. To give information about issues of availability, formulation, cost, storage and stability medicines.
6. To disseminate information in the form of drug/disease monographs, bulletins and websites.
7. To involve in research activities including pharmaco-epidemiology.
8. To provide the knowledge about medication and Drug interaction.
9. To ensure the patient about importance of health as well as diseases and medication.
10. To observe, analyze and satisfy the queries of patients.

Constitution of Institutional Drug Information and Counselling Center

Constituted for Academic Year 2021-22

S.N.	Name of the Faculty	Designation	Role in IDICC
1	Dr. Shirish P. Jain	Principal	Chief Adviser
2	Dr. Gaurav Harlalka	Associate Professor	Adviser
3	Mr. Mangesh Deokar	Associate Professor	Co-ordinator
4	Mr. Sandip Hurdade	Assistant Professor	Member
5	Mr. Sachin P. Borikar	Assistant professor	Member


(Co-ordinator)
Mr. Mangesh N. Deokar




Principal
Principal
Rajarshi Shahu College of Pharmacy,
Malvihir, Buldana.

NOTICE

Date. 18/01/2022

All the members of Institutional Drug information and Counselling Center (IDICC) here by inform that, the first Inaugural meeting is scheduled on date 20/01/2022 in the Principal cabin at 4.00 pm.





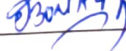
Take a note of it.

The agenda of the meeting is as follows

- 1) Appointment of members and advisors in Institutional Drug information and Counselling Center (IDICC)
- 2) Roles and responsibilities of individual members in IDICC.
- 3) Requirements of IDICC.
- 4) Schedule program for start up IDICC.




Principal
 Rajarshi Shahu College of Pharmacy,
 Malvihir, Buldana.

S.N.	Name of the Faculty	Designation	Role in IDICC	Signature
1	Dr. Shirish P. Jain	Principal	Chief Adviser	
2	Dr. Gaurav Harlalka	Associate Professor	Adviser	
3	Mr. Mangesh Deokar	Associate Professor	Co-ordinator	
4	Mr. Sandip Hurlpade	Assistant Professor	Member	
5	Mr. Sachin P. Borikar	Assistant professor	Member	



Date : 08 /03/2022

REPORT

On Occasion of International Women's Day Celebration

Organised


Hemoglobin, blood group, blood pressure & body weight determination Camp

A Hemoglobin, blood group & body weight determination Camp was organized by Drug Information and Patient Counselling Center of Rajarshi Shahu College of Pharmacy, Buldana on a occasion of International Women's Day Celebration on dated March 08, 2022 at Pharmacy college. The occasion was graced by Dr. Ashvini jadhav, Diabetologist, Civil Hospital Buldana, she had given the guest lecture and shared their views amongst the girl students about anemia and its prevention in women's. The program winded up by open discussion and active participation from the audience which was answered and discussed by the resource persons. After completion of talk, the camp began at 12.00 pm. with a short inaugural function by cutting of inaugural ribbon by Chief Guest Dr. Jain Mam, Assistant Professor, RSCP, Buldana, Respected Principal Dr. Shirish Jain, Vice-principal, Dr. Prakash Kendre, they also expressed gratitude to the DIPCC cell of the college for its continuous endeavor in this regard. In this camp total 132 girls students has actively participated. Finally, the program ended successfully on a very positive note in the presence of various dignitaries, faculties and students.

Activity in charge/s

IQAC Coordinator

Principal

Name of activity	: Hemoglobin, blood pressure, blood group & body weight determination camp			
Organizers	: RSCP, Buldana			
Venue	: RSCP campus, Buldana	No. of participants:	Students	Teachers
		Total	127	5
Date and Day	: 08-03-22	Time:	12.00PM to 5.00PM	
Objective/s	: To make students of the college aware about blood donation.			
In charge/s	: Dr. Gaurav Harlalk Mr. Sachin Borikar	: Mr. Mangesh Deokar Ms. Arti Kale		
Brief Report on activity	: Hemoglobin, blood pressure, blood group & body weight determination camp was organised at RSCP, Buldana. This activity developed a social commitment in the minds of the students. The work that is creating social commitment by presenting a nation-wide program like Hemoglobin, blood pressure, blood group & body weight determination. Finally the camp was appreciated by the Principal and management.			
Photograph/s	: 			
Outcome	: <p style="text-align: center;">Camp @RSCP, Buldana</p> 1. Students from B. Pharm first year of the college were made aware about importance of haemoglobin, blood group, blood pressure and BMI in haematological disorders. 2. This activity developed importance of blood group in blood transfusion process as social commitment (Donate blood save life) in the minds of the students.			

[Signature]
Activity in charge/s

[Signature]
IQAC Coordinator

[Signature]
Principal



Dwarka Bahuuddeshiya Gramin Vikas Foundation's

Reg. No. Mah/5275/99, Mumbai Public Trust. Regd. No. F-5333

Estd: 2008

Rajarshi Shahu
College of Pharmacy

Journey Towards Academic Excellence

Rajarshi Shahu College of Pharmacy

(Approved by AICTE & PCI, & DTE, Affiliated to M. S. B. T. E. Mumbai)

Shri. Dhruatraoji Sawale
President

Prof. Dr. Shirish P. Jain
Principal

Ref. No. RSCP 6312/2021-22

Date: 12/03/2022

To, Civil Surgeon Sir,
Chief Medical Officer,
Civil Hospital,
Buldana. Dist. Buldana.


Subject : Regarding organizing blood donation camp on 15th March 2022.

Respected Sir/Madam,

With reference to the above cited subject, we would like to inform you that, on tomorrow 15th March 2022, we are going to celebrate 67th Birthday of our beloved President Mr. Dhruatraoji Sawle Saheb. According to this we have planned "BLOOD DONATION CAMP" at our institute campus.

We would be grateful to you indeed if you could assist with the same. Kindly let us know what would you want us to organize at our level in our campus.

Thank you very much.


Principal
Rajarshi Shahu College of Pharmacy
Malvihir, Buldana.

Dr. Gaurav Haralkar
Mob. No. - 7498032048

At. Post Malvihir, Botha Road, Buldana, Maharashtra - 443 001

Email ID:-principaldip@gmail.com

Tel No.:- 7620764990/762076091936

आरोग्य सेवा

जा.क्र.रक्तपेढी/रक्तदान शिबीर/...../२२
कार्यालय : जिल्हा शल्य चिकित्सक बुलडाणा
दिनांक:- /०३/२०२२

4228-84

14 MAR 2022

विषय:- रक्तदान शिबीर बाबत.

संदर्भ:- राजेश्री शाहु कॉलेज ऑफ फॉर्मसी श्री धुपतरावजी सावळे साहेब यांच्या ६७ जन्म दिवसा निमित्त माळविहीर बुलडाणा जि. बुलडाणा याचे पत्र श्री.सदस्य मलकापूर बैठक दिनांक: १४/०३/२०२२

वरिल संदर्भीय विषयान्वये आपणास कळविण्यात येते की, दि. १५/०३/२०२२ रोजी राजेश्री शाहु कॉलेज ऑफ फॉर्मसी माळविहीर बुलडाणा जि.बुलडाणा येथे रक्तदान शिबीर आयोजित करण्यात आले आहे. तरी सदर शिबीरास खालील कर्मचारी सर्व साहीत्यासह वेळेवर ठिक ११.०० वा. हजर राहावे.

१. डॉ. शितल सोळंके रक्त संक्रमण अधिकारी.
२. श्री. गौरव कुलकर्णी रक्तपेढी तंत्रज्ञ.
३. कु. सीमा मेश्राम पी. आर. ओ.
४. श्री. भुषण खरे प्रयोगशाळा तंत्रज्ञ.
५. श्री. कैलाश गायकवाड अधिपरिचारक.
६. ज्ञानेश्वर राडेकर कॉन्सीलर
७. श्री. रंजित..... कक्षसेवक.
८. श्री. अनिल घोडेस्वार कक्षसेवक.
९. श्री. वाघडे..... वाहनचालक.

R. P. D.

अतिरिक्त जिल्हा शल्य चिकित्सक,
जि.र.बुलडाणा.

प्रति, वरिल प्रमाणे सर्व,

प्रत:-

१. जिल्हा शल्य चिकित्सक सामान्य रुग्णालय बुलडाणा.
२. वैद्यकीय अधिक्षक ग्रामीण रुग्णालय चिखली.
३. रक्तपेढी डॉ. ज्ञानेश्वर राऊत रक्तपेढी मध्ये हे रक्त संक्रमण अधिकारी म्हणुन काम पाहतील.
४. अधिसेवीका जिल्हा सामान्य रुग्णालय बुलडाणा.
५. प्रिन्सीपल प्रो. डॉ. शिरीष जैन जि. बुलडाणा त्यांचे संदर्भपत्रान्वये माहीतीसाठी.
६. मुकादम सामान्य रुग्णालय बुलडाणा यांनी शिबीराच्या दिवशी श्री. अनिल घोडेस्वार यांचे जागी दुसरा कक्षसेवक रक्तपेढीत देण्याची व्यवस्था करा.
७. रोखपाल श्री. माळी यांनी कॉम्प करीता डीझेलची व्यवस्था करावी.
८. वाहनचालक श्री. काटोके यांनी कॉम्प करीता डीझेलची व्यवस्था करावी

आरोग्य सेवा

जा.क्र.रक्तपेढी/रक्तदान शिबीर/...../२२
कार्यालय : जिल्हा शल्य चिकित्सक बुलडाणा
दिनांक:- /०३/२०२२

4220-84
4220-45

विषय:- रक्तदान शिबीर बाबत.

संदर्भ:- राजेश्री शाहु कॉलेज ऑफ फॉर्मसी श्री.भुपतरावजी सावळे साहेब यांच्या ६७ जन्म दिवसा निमित्त माळविहीर बुलडाणा जि. बुलडाणा यांचे पत्र श्री.सदस्य मलकापूर बैठक दिनांक: १४/०३/२०२२

वरिल संदर्भीय विषयान्वये आपणास कळविण्यात येते की, दि. १५/०३/२०२२ रोजी राजेश्री शाहु कॉलेज ऑफ फॉर्मसी माळविहीर बुलडाणा जि.बुलडाणा येथे रक्तदान शिबीर आयोजित करण्यात आले आहे. तरी सदर शिबीरास खालील कर्मचारी सर्व साहीत्यासह वेळेवर ठिक ११.०० वा. हजर राहावे.

- १.डॉ.शितल सोळंके रक्त संक्रमण अधिकारी.
- २.श्री.गौरव कुलकर्णी रक्तपेढी तंत्रज्ञ.
- ३.कु.सीमा मेश्राम पी.आर.ओ.
- ४.श्री.भुषण खरे प्रयोगशाळा तंत्रज्ञ.
- ५.श्री.कैलाश गायकवाड अधिपरिचारक.
- ६.ज्ञानेश्वर गुडेकर कॉन्सीलर
- ७.श्री. 20/14..... कक्षसेवक.
- ८.श्री. अनिल घोडस्वार कक्षसेवक.
- ९.श्री. 9/14..... वाहणचालक.

R. Bhat
15/03/22

अतिरिक्त जिल्हा शल्य चिकित्सक,
जि.रु.बुलडाणा.

प्रति,वरिल प्रमाणे सर्व,

प्रत:-

- १.जिल्हा शल्य चिकित्सक सामान्य रुग्णालय बुलडाणा.
- २.वैद्यकीय अधिकांक ग्रामीण रुग्णालय चिखली.
- ३.रक्तपेढी डॉ.ज्ञानेश्वर राऊत रक्तपेढी मध्ये हे रक्त संक्रमण अधिकारी म्हणुन काम पाहतील.
- ४.अधिसेवीका जिल्हा सामान्य रुग्णालय बुलडाणा.
- ५.प्रिन्सीपल प्रो.डॉ.शिरीष जैन जि.बुलडाणा त्यांचे संदर्भपत्रान्वये माहीतीसाठी.
- ६.मुकादम सामान्य रुग्णालय बुलडाणा यांनी शिबीराच्या दिवशी श्री.अनिल घोडेस्वार यांचे जागी दुसरा कक्षसेवक रक्तपेढीत देण्याची व्यवस्था करा.
- ७.रोखपाल श्री.माळी यांनी कॉम्प करीता डीझेल्ची व्यवस्था करावी.
- ८.वाहनचालक श्री.काटोके यांनी कॉम्प करीता डीझेल्ची व्यवस्था करावी

Date : 15/03/2022

BLOOD DONATION CAMP – REPORT

A Blood Donation Camp was organized by Drug information and Patient Counselling Center (DIPCC) of Rajarshi Shahu College of Pharmacy, Buldana on in association with Zilha Shalya Chikitsak Samanya Rugnalaya, Buldana on a occasion of our beloved Honorable President Shree Drupatraoji Sawale brthday on March, 15, 2022 at Pharmacy college campus. The camp began at 12.00 pm. with a short inaugural function by Chief Guest of the Blood Donation Camp, Respected Dr. Prakash Kendre, Vice-principal, RSCP, Buldana expressed his gratitude to the DIPCC cell of the college for its continuous endeavor in this regard. Blood Bank Officer General Hospital, Buldana Dr. Shital Solanke encouraged all the donors by saying “Gift of Blood is Gift of Life”. She also thanked all the donors for the Noble steps they have taken and to help the fellow brethern. Dr. Gaurav V. Harlalka Co-ordinator and HOD Pharmacology Department, RSCP, Buldana guided the students for growing need of blood in the state and commended the young volunteers for their noble act. Program Officer Professor Sandip Hurpade, Arti Kale and Sachin Borikar, addressed the gathering as well as they guided that blood cannot be manufactured - it only comes from generous donors to save the society and mankind, we should come forward for this Noble cause. Total 67 units of blood were donated by both students and the staff members of Rajarshi Shahu College of Pharmacy, Buldana. It is a way of Rajarshi Shahu College of Pharmacy, Buldana gesture in bringing a ray of hope to alleviate the serious problems of acute shortage of blood. While addressing first time donors at the camp volunteers brought awareness in them about shortage of blood and why we must donate blood every year, to help the persons requiring blood. Blood donation can save lives of innumerable persons. Donation of blood is very critical and crucial for saving lives many patients and those who have met with accidents. It is as such a great service or contribution to the society and people living in it. The work that is creating social commitment by presenting a nation-wide program like blood donation finally at the end of the programme, camps was appreciated by the principal and management. Certificates and letter appreciation was received from Zilha Shalya Chikitsak Samanya Rugnalaya, Buldana and distributed to individual donors.




Activity in charge/s



IQAC Coordinator



Principal

Name of activity	: Blood donation camp			
Organizers	: RSCP, Buldana collaboration with Zilha Shalya Chikitsak Samanya Rugnalaya, Buldana			
Venue	: RSCP, Buldana	No. of participants:	Students	Teachers
		Total	56	11
Date and Day	: 15-03-22	Time:	12.00PM to 5.00PM	
Objective/s	: To make students of the college aware about blood donation.			
In charge/s	: Dr. Gaurav Harlalka Mr. Mangesh Deokar Mr. Sandip Hurpade Mr. Sachin Borikar Ms. Arti Kale			
Brief Report on activity	: Blood donation camp was organised at RSCP, Buldana. This activity developed a social commitment in the minds of the students. The work that is creating social commitment by presenting a nation-wide program like blood donation camps was appreciated by the Principal and management. Certificates and letter of appreciation was received from Zilha Shalya Chikitsak Samanya Rugnalaya, Buldana and distributed to donors.			
Photograph/s	: 			
Outcome	: <p style="text-align: center;">Blood donation camp @RSCP, Buldana</p> <ol style="list-style-type: none"> 1. Students were made aware about the importance of blood in different haematological disorder in men's and women, 2. Students from B. Pharm first year of the college were made aware about importance of blood donation for to save the life of blood needed person along with importance of blood in blood transfusion process. 3 This activity developed a social commitment in the minds of the students 			

Borikar
Activity in charge/s

Deokar
IQAC Coordinator

Hurpade
Principal

Institutional Drug Information & Patient Counselling Centre (IDIPCC)

Organises

Blood Donation Camp

15 March 2022

On Occasion of Birthday of President Respected Shree Dhrupadraoji Sawale Saheb

List of Blood Donor's

Sr. No.	Name of Donor's	Year/ Faculty	Age (yrs)	Sex (M/F)	Body weight	Blood Group	Signature
✓ 1)	Vaibhav B. Rajput	Dph-I	25	M	53		BB Rajput
✓ 2)	Vibhute Sir	Faculty	41	M	64	A+	(Signature)
✓ 3)	Gorakhnath Kankhade	Dph-II	21	M	52	AB+	(Signature)
✓ 4)	Ravan Malhaze	DPhII	21	M	56		(Signature)
✓ 5)	Shivshankar Digam	DPhI	22	M	53	AB+	(Signature)
✓ 6)	Ashish Patthe	DPhI	21	M	59		(Signature)
✓ 7)	Prathamesh Rindhe	DPhII	20	M	51	A+	(Signature)
✓ 8)	Visharajit Torre	DPhI	19	M	60	A+	(Signature)
✓ 9)	Shrikrishna Chavan	DPhII	20	M	65	O+	(Signature)
* 10)	Krushnaga Kankhade	DPhI	18	M	55		(Signature)
✓ 11)	Harshanand Awasare	DPhI	19	M	55		(Signature)
✓ 12)	Balu Chavan	BPhIII	21	M	60		(Signature)
✓ 13)	Sachin Patalk	BPhIII	22	M	73	AB+	(Signature)
✓ 14)	Abhay Hirgude	BPhIII	22	M	66	O+	(Signature)
✓ 15)	Rahul Dandde	DPhI	18	M	60		R.N. Dandde
✓ 16)	Caurav Kabanade	BPhIII	22	M	75	B+	(Signature)
✓ 17)	Vaishnavi Kayande	BPhI	18	F	50	A+	(Signature)
✓ 18)	Swapnil Rather	BPhIII	21	M	75	A+	(Signature)
✓ 19)	Kalyani Kathale	MPhI	23	F	68	B+	(Signature)
✓ 20)	Sonay Sir	Faculty		M			
✓ 21)	Lokwanji Sir	Faculty	36	M	71	O+	(Signature)
✓ 22)	Skendre Sir	Faculty	41	M	73	A+	(Signature)
✓ 23)	Murali Munde	BPhI	18	F	60	A+	(Signature)
✓ 24)	Pushpa Barande	BPhIII	20	F	81	B+	(Signature)
✓ 25)	Prinyanka Bhagat	BPhIII	21	F	57	A+	(Signature)
✓ 26)	Vaishali more	BPhIII	21	F	69	B+	(Signature)



DBUGVF's

Rajarshi Shahu College of Pharmacy, Buldana

(Approved by AICTE, PCI, New Delhi and affiliated to Sant Gadge Baba Amravati University, Amravati)

Sr. No.	Name of Donor's	Year/ Faculty	Age (yrs)	Sex (M/F)	Body weight	Blood Group	Signature
✓ 27	Vaishnavi murhe	BPh II	20	F	59	O+	<i>[Signature]</i>
✓ 28	Yash Chandak	BPh III	21	M	58	O+	<i>[Signature]</i>
✓ 29	Mansi Ghuge	BPh I	19	F	76	B+	<i>[Signature]</i>
✓ 30	Gaurav Jadhav	BPh I	20	M	60	A+	<i>[Signature]</i>
✓ 31	Samiksha Pise	BPh I	18	F	53		<i>[Signature]</i>
✓ 32	Mahesh Ghuge	BPh II	21	M	81		<i>[Signature]</i>
✓ 33	Jaidip Rajudette	BPh III	22	M	80	O+	<i>[Signature]</i>
✓ 34	Vaishnavi raut	BPh I	18	F	65	O+	<i>[Signature]</i>
* 35	Sujat Bhagat	BPh III	22	M	80	O-	<i>[Signature]</i>
✓ 36	Aniket Kharate	BPh III	22	M	55	AB+	<i>[Signature]</i>
✓ 37	Purshotam Navle	BPh II	20	M	75		<i>[Signature]</i>
✓ 38	Deshmanesir	Faculty	40	M			<i>[Signature]</i>
✓ 39	Raju Gahwane		47	M			<i>[Signature]</i>
✓ 40	Hanuman Anka	BPh IV	23	M	83	B+	<i>[Signature]</i>
✓ 41	Sudesh Patil	BPh III	21	M	80	AB+	<i>[Signature]</i>
✓ 42	Vaibhav Nivrante	BPh I	20	M	70	O+	<i>[Signature]</i>
✓ 43	Yash Jadhav	BPh I	19	M	80	O+	<i>[Signature]</i>
✓ 44	Rishikesh Shinde	BPh I	19	M	52	O+	<i>[Signature]</i>
✓ 45	Swapnil Samap	BPh II	21	M	53	B+	<i>[Signature]</i>
✓ 46	Vikas Thite	BPh II	20	M	60		<i>[Signature]</i>
✓ 47	Dipak Bhatelkar	BPh II	20	M	65		<i>[Signature]</i>
✓ 48	Vaibhav Voneke		25	M			<i>[Signature]</i>
✓ 49	Swapnil Jadhav	BPh I	19	M	52		<i>[Signature]</i>
✓ 50	Lokesh Gayale	BPh II	20	M	75		<i>[Signature]</i>
✓ 51	Dinesh Naik		21	M			<i>[Signature]</i>
✓ 52	Nandkishor Tayde		21	M			<i>[Signature]</i>
✓ 53	Abhishek Bagale		21	M			<i>[Signature]</i>
✓ 54	Atul Rathor	BPh I	18	M	55	O+	<i>[Signature]</i>
✓ 55	Abhishek adhu	BPh I	20	M	76	A+	<i>[Signature]</i>
✓ 56	Suyog Shelke	BPh I	18	M	66	O+	<i>[Signature]</i>
✓ 57	Rushikesh Ambre	BPh I	20	M	76	A+	<i>[Signature]</i>
* 58	Aditya Gavande		18	M			<i>[Signature]</i>
✓ 59	Shivam Lavale	BPh I	21	M	55	B+	<i>[Signature]</i>
* 60	Mangesh Raut		25	M			<i>[Signature]</i>
✓ 61	Shripad Borkar	BPh II	19	M	60	O+	<i>[Signature]</i>
✓ 62	Gopal Hingankar		27	M			<i>[Signature]</i>
✓ 63	Shubham Ambre	BPh 4th	20	M	70		<i>[Signature]</i>
✓ 64	Chetan Kolhe	BPh 4th	22	M	80	B+	<i>[Signature]</i>

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Institutional Drug Information & Patient Counseling Center

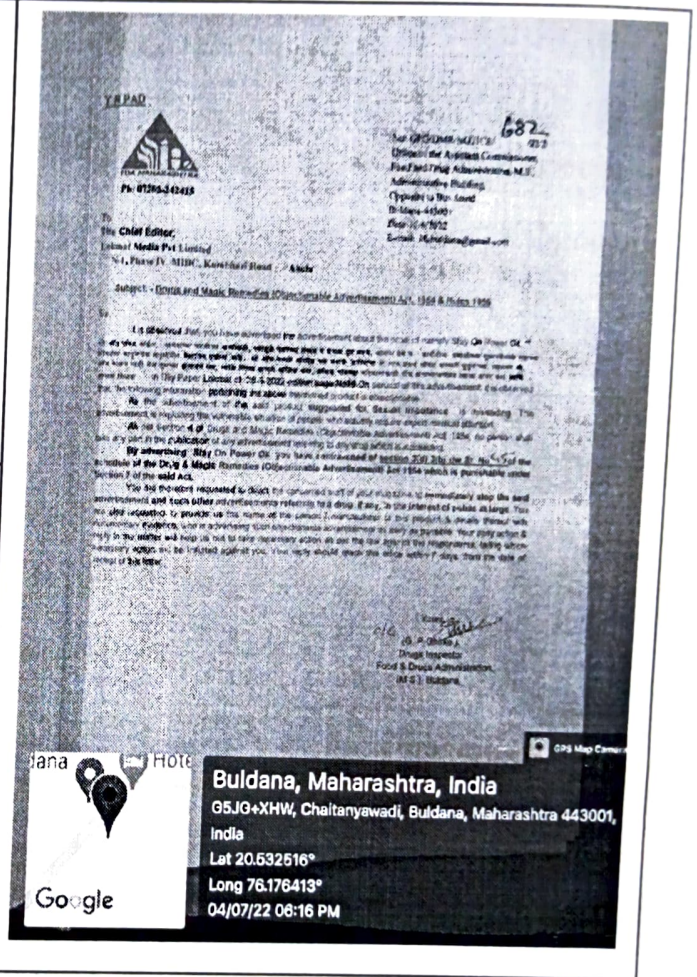
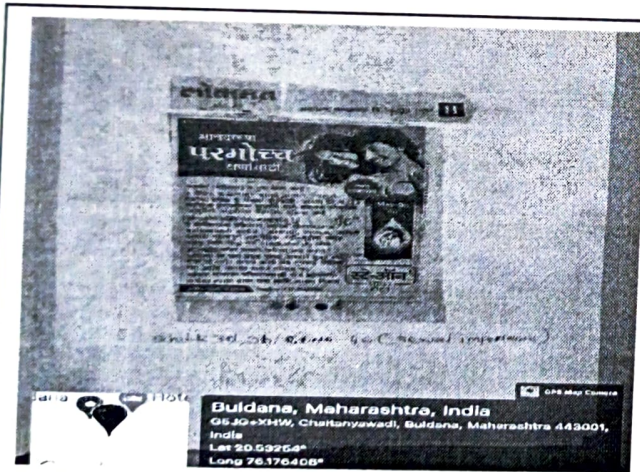
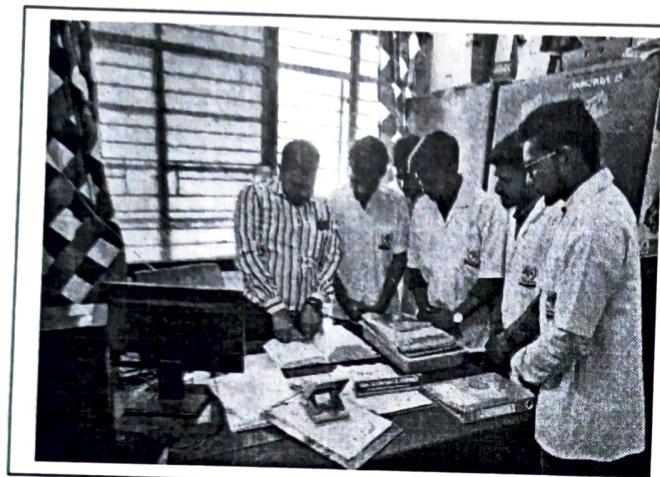
Organized

Program Information

Title of activity	: Survey on Objectionable Advertisement in Newspaper (Drugs & Magic Remedies Objectionable advertisement Act 1954 & Rules 1955) Drug Price Calculation (Drug Price Control Order 2013)
Coordinator/s	: Mr. Mangesh N. Doekar , Mr. Sachin P. Borikar
Convenor	: Dr. Shirish Jain
Date	: 04 July 2022 – 05July 2022
Time	: 11.00 AM To 05.30 PM
Objective of program	: To raise awareness amongst students, members in society, Pharmacists about price of drug available in market and impact of objectionable advertisement published in newspaper & social media on peoples in the society.
Expected outcome	: Participated students were learned about calculation of drug price in market & its relevance to DPCO Act 1995. They also learned the impact of objectionable advertisement on peoples in society. Under the direction of Mr. G.P. Ghirke, Drug Inspector, Food & Drug Administration, Buldana, they made a concerted effort to prevent objectionable advertisements from being used as well as to raise the price of pharmaceuticals that were readily available.
No. of participants/delegates	: 15

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Geo Tagged Photos (if available), if it is online then add screenshots:



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Survey on Objectionable Advertisement in Newspaper (Drugs & Magic Remedies Objectionable advertisement Act 1954 & Rules 1955) & Drug Price Calculation (Drug Price Control Order 2013)

Students from M. Pharm first year Pharmacology Department of Rajarshi Shahu College of Pharmacy, Buldana was actively participated in the survey of calculation of prices of available drugs in medical stores in accordance with the guidelines of Drug Price Control Order 2013 & Drug & Magic Remedies Objectionable Advertisement Act 1954 & Rules 1955 under the supervision of Mr. G.P. Ghirke, Drug Inspector, Food & Drugs Administration, Buldana (M.S).

In this activities present students were find out the brand name of various drugs like levothyroxine such as Euthyrox available in the market along with their market and ceiling price per unit tablet & whether it have price under DPCO Act, They also collected & compiled the information of available drugs in the market along with manufacturing, expiry date and they were also gathered the information about brand name of drugs like thyroxin drug preparation available in market such as thyrox, thyronorm etc.

Moreover they also carried out the survey on objectionable advertisement (As per the Drug & magic remedies act 1954) in this survey students were collected the news, objectionable advertisement published in the different newspapers & they were noticed & reported such a objectionable advertisements published in newspaper to avoid misconception and prohibition of this drugs amongs the peoples in the society to improve the rational drug therapy. With this survey students were benefited, gained, awared & cultivated the knowledge about drug price calaculation, brand name identification, identification of objectionable advertisement in the newspaper along importance of manufacturing as well as expiration date of medicines & its impact on human health, overall this survey was initiated under the presence and supervision of G.P. Ghirke, Drug Inspector, Buldana.

Date: 05 July 2022



Program Coordinator



Principal

Rajarshi Shahu College of Pharmacy
Malvihir, Buldana.

Page 3 of 3

To,
The Principal Sir,
Rajanshi Shahu college of Pharmacy, Buldana.

Subject : To complete the task of DPCO and
DMR under the supervision of
G.P. Gihirke (Drug Inspector, Buldana).

Respected Sir,

We are undersigned the students
of M. Pharm 1st year, department of
Pharmacology. We are participated in the
task of DPCO and DMR under the supervision
of G.P. Gihirke Sir.

Sir, In DPCO (Drug price control
order) we study or find the brand name
of levothyroxine such as Euthyrox, and
their marketing & ceiling price per tablet, also
their manufacturing and marketing the drug.
Also find the brand name of thyroxine, such
as thyrox, thyronorm.

Sir, In DMR (Drug magic remedies)
1954 Act & Rules 1955, we notice the
observed the advertisement about the product
namely "stay on power oil" in Lokmat paper
dt 28-3-2022. edition page no.10. As the advertisement
of the said product suggested for sexual
impotence is misleading. This advertisement is
exploiting the vulnerable situation of people,
who actually require expert medical attention.
So, we send notice to lokmat, immediately

stop the said advertisement and such other advertisement referring to a drug, if any, in the interest of public at large.

Sir, the survey was carried out in presence and supervision of G.P. Ghirke (Drug Inspector, Buldana).

Thank You.

Yours sincerely,
Dipak Sonawane ~~Sonawane~~
Ashitosh Wagh - ~~Wagh~~

True
04/07/2022
(G.P. Ghirke)
Drug Inspector
Food & Drugs Administration
(M.S.), Buldana.