



# JAWAHARLAL NEHRU MEDICAL COLLEGE

*KLE Academy of Higher Education & Research*

*(Deemed-to-be-University)*

NEHRUNAGAR, BELAGAVI – 590010, KARNATAKA, INDIA

Accredited 'A' Grade by NAAC (2<sup>nd</sup> Cycle)

Place in Category 'A' by MHRD

(GoI)

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## **1.3.1 Institution integrates crosscutting issues relevant to Gender, Environment and Sustainability, Human Values, Health Determinants, Right to Health Issues, Emerging demographic changes and Professional Ethics in the curricula**

### **On Gender:**

- Medical profession has its own share of gender inequality related issues. The college has integrated the ethos of gender equality into its organizational structure with several vital cogs of the operational machinery being helmed by the female professionals in their respective fields. Even at the level of students to imbibe the spirit of gender inequality socialization and interaction are promoted and cultivated through various activities by the programs undertaken by the college.
- There are many platforms for hands-on experiences related to gender sensitivity which enable students to interface with real life situations such as field work, community outreach, gender sensitization activities under various seminars, conferences, guest lectures, events such as gender talk cum photo exhibition in collaboration with NGOs, street plays and the like. Students are apprised about conceptual, theoretical and analytical understanding about gender as a social construction and various approaches to work towards gender equity with in India and from a cross-cultural perspective during their performances in Cultural fests.
- The college strictly adhere to no gender discrimination in admissions
- At J.N Medical College, many women are in power i.e Principal HODs, and Heading many Committees and governing bodies.
- Anti ragging cells and committees that address any and every issue that pertain to sexual harassment, there is a university women cell which deals with every case of mental, physical, sexual violence. The male students can get their grievances redressed at the University grievance cell.

### **On Environment and Sustainability:**

- The multi dimension of environment and sustainability as a cross cutting issue is carefully placed among students. Various themes that are focused on are: green

technology; environmental laws; pollution; low cost housing; natural resource management; waste management; environment sustainability, rural development etc. are given to students to present at various platforms.

- College follows the SWACHH BHARATH ABHIYAN as a regular activity ,and keeping the surroundings clean and spreading the word clean society and clean community
- Plastic free zone is strictly followed
- College is complied with solid waste management, students are also trained and posted in the solid wasted management
- LED lights all over college, NSS Plantation programs, utilization of solar energy, water sewage treatment plan- using in all gardens, vanmahaotsava are regularly practiced.

#### **Human Values, Health Determinants, Right to Health Issues:**

- Along with understanding the clinical aspects of patient care the basic tenets of professionalism and the dogma of ethical practice are introduced into the teaching program.
- The course and curriculum for UGs and PGs inculcates the topics which enlighten the student to the various health determinants that characterize the individual health.
- Students are trained with ethical clinical monthly program in the hospital and by having camps in rural areas, spreading the awareness in the rural areas.
- Stress management overview even in foundation course
- Human values are taught as component of ATCOME Module.
- All the festivals are celebrated in the campus.
- The college also has two temples in its vicinity. Guest Lectures addressing spirituality and Health are organized regularly for new entrants.
- To promote healthy lifestyle college provides gym facility, indoor and outdoor sports facility, no vehicle zones, free Hepitits B vaccination, regular fumigation against Mosquito borne diseases.
- Red cross and NSS cell conducts community oriented programs on regular basis. activities
- Health Determinants: Patient management is protocol based – IMR, MMR rates, health care programmes, community based services are offered,

- A musical therapy “Roga vs Raga” is organized third Friday of every month for the benefits of patients at hospital premises.
- **Right to Health:** At J.N MC. Dr Prabhakar Kore Charitable hospital treatment to the patients are provided at very low subsidized costs
- Health care cards are provided for all the employees and students
- Insurance schemes like ayushman bharat and many more are offered to the society
- Health talks on various health related issue are telacsetd regularly on FM Radiostation 90.4 Venudhwani by our Doctors

### **Emerging demographic changes and Professional Ethics**

- The student NSS Cell and Youth Red cross Society undertakes various events regarding Emerging demographic changes
- Professional Ethics is introduced to all the students in their orientation Programme . This course deals with value education, personal and social skill development, human rights, employability skill development and environmental governance.



Principal,  
J.N. Medical College, Belagavi.



# K L E VISHWANATH KATTI INSTITUTE OF DENTAL SCIENCES



(A Constituent unit of KLE Academy of Higher Education & Research  
(Formerly known as KLE University) Deemed-to-be-University u/s 3 of the UGC Act, 1956)  
J.N.M.C. Campus, Nehru Nagar, Belagavi-590 010, Karnataka, India  
Accredited 'A' grade by NAAC (2<sup>nd</sup> Cycle) Placed in Category 'A' by MHRD (GoI)

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## 1.3.1 Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values, Health Determinants, Right to health issues and Professional Ethics into the Curriculum

### Response:

#### Gender

The Institution enriches issues related & relevant to Gender by conducting the various activities through well established women cell and programmes on gender championship which strengthens the women community.

#### Environment and Sustainability

Environment and Sustainability is addressed regularly at the professional level by conducting “**Vanamahotsava**” and other awareness activities through NSS cell. Institute has adopted “**Swatch Bharat Abhiyan**” which deals with the cleanliness of Institute and its surrounding.

#### Human Values

Institute has a system of starting the profession by having a orientation programme for the UG and PG students every year. Institution also conducts Kannada Teaching programs for newly joined student to overcome the linguistic differences which itself are unique ways to build the moral and social behavior and as a part of





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syllabus all the UG & PG students are encouraged to inculcate the human values Institution conducts various guest lectures, programs like Blood, Body organs donations, various national & state Day celebrations, Educational tours and Cultural Activities which sensitize the UG,PG & faculty regarding the human Values. Students are motivated to participate in various activities like NSS, youth red cross, programs where public activities on behavioral and social issues are addressed.

## Health Determinants & Right to Health Issues:

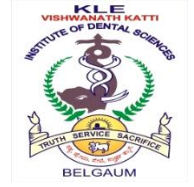
Hospital offers primary to tertiary level health care facilities through OPD/IPD across all speciality& super specialty. Institute provides the entire information about the health care services at the level of registration and at all various levels. The institute also sensitizes the UG and PG students towards the proper waste disposal methods so that, students, staff, other health personnel and general public are benefited.

## Demographic Changes:

Students are given survey studies as a part of the curricular activity and encouraged to undertake activities through well established NSS Units.



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## Professional Ethics:

University has incorporated Ethics in dentistry as a part of BDS curriculum which creates the awareness about the all forms of dental ethics. Orientation program regarding the same is also conducted yearly. The Dentist oath has been displayed at the prominent places and given as oath for the students on graduation day.



Principal,  
KLE V K Institute of Dental Sciences,  
Belagavi.

### 1.3.1 Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values, Health Determinants, Right to health issues and Professional Ethics into the Curriculum

#### Response:

#### Gender

The Institution enriches curriculum on issues related & relevant to Gender by conducting the various activities through well established women cell which strengthens the women community.

#### **Environment and Sustainability**

Environment and Sustainability is addressed regularly at the professional level by having Environmental science as a part of curriculum, which is taught & assessed. An institute also conducts various activities like Birthday plantation for faculty, seed ball sowing, Vanamahotsava Herbal garden visits and Awareness activities through NSS cell. Institute has adopted Swatch Bharat Abhiyan which deals with the environmental issue.

#### **Human Values**

Institute has a system of starting the profession by shishyopanayeneya Samskar, and by then students are addressed through the sanskara program at each professional year. Institution is conducting Kannada Teaching programs for newly joined student to overcome the linguistic differences which itself are unique ways to build the moral and social behaviours and as a part of syllabus all the UG & PG students are encouraged to inculcate the human values while teaching the samhitas which addresses Sadvritt, qualities of vaidya Rogi, Paricharak atc. Institution conducts various guest lectures, Programmes like Blood, Body organs donations, Various Day celebrations, Educational tours and Cultural Activities which sensitise the UG,PG & faculty regarding the human Values. Students are motivated to participate in various activities like NSS programmes where public activities on behavioral and social issues are addressed. Institute has developed a programme "Prabhashanam" which builds up a technique of Standard method of studying Ayurveda literature.

### Health Determinants & Right to Health Issues:

Hospital offers primary to tertiary level health care facilities through OPD/IPD across all speciality & super specialty. Institute provides the entire information about the health care services at the level of registration and at all various levels. The provisions are made with the consent of patient and follows the guidelines of NABH. Institutional employs, students and general public are benefited with health care policies which provides health cares, Morning Yoga, Periodic Monsoon Prophylaxis Employees Health checkups etc

### Demographic Changes –

Students are given survey studies as a part of the curricular activity and students undertake various survey activities through well established NSS Units.

### Professional Ethics:

University has incorporated Indian constitution as a part of BAMS curriculum which creates the awareness about the all forms of ethics. These ethics are available in our classics. **In Sushruta Samhita we have Chapter called Vishikhanupravesh (Graduation Day) Adhyaya for Professional ethics.** The Charak oath has been displayed at the prominent place and given as oath for the students on graduation day.



Principal

Shri. BMK Ayurveda Mahavidyalaya  
Shahapur Belagavi  
A Constituent Unit of KAHER





# KLE College of Pharmacy

A Constituent Unit of

## KLE Academy of Higher Education and Research

(Deemed-to- be University established u/s 3 of the UGC Act, 1956)

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Ref. No. KLE / COP/

Date :

### 1.3 Curriculum Enrichment (40)

**1.3.1 Institution integrates crosscutting issues relevant to Gender, Environment and Sustainability, Human Values, Health Determinants, Right to Health Issues, Emerging Demographic changes and Professional Ethics in the curricula** [10]

**Response:**

Institute has imbibed different types of the courses as well as optional subjects in the curriculum to integrate cross cutting issues relevant to environment and sustainability, professional ethics at undergraduate level courses. Apart from the curriculum, students have participated in the activities to inculcate the gender equality values.

**1. Environment and Sustainability**

Environmental Sciences course is included in II semester (2017-18 curriculum) and Environmental Studies is included in VI semester (2013-14 curriculum). In order to sensitize about this cross cutting issue, assignments and project models have been implemented at the institute level. Students have also participated in the competition on Rain Water harvesting ideas.

**2. Professional Ethics**

Implementation of Industrial Pharmacy in V semester, Social and Preventive Pharmacy and Pharmaceutical marketing management in VIII semester (2017-18 curriculum) enables students to learn and inculcate pharmaceutical professional approaches at undergraduate level. In the case of postgraduate students, research ethics are inculcated through the implementation of course Research methodology highlighting the importance of plagiarism. To ensure these ethics, workshops and seminars focusing on plagiarism have also been organized for the students.

**3. Gender Sensitivity**

Institute accomplishes gender sensitivity through practices or events organized. Students have participated actively in the skit competition showcasing their talents, held at cultural meet based on theme "Gender Equality".



Principal,  
KLE College of Pharmacy  
Belagavi.



# KLE COLLEGE OF PHARMACY

Vidyanagar, HUBBALLI – 580 031, Karnataka

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List of List of courses that integrate crosscutting issues mentioned above

Programme	Course/subject	Crosscutting issue (Gender, Environment and Sustainability, Human Values, Health Determinants, Right to Health Issues, Emerging demographic changes and Professional Ethics)
B. Pharm	Gender Equality	Through the programme of gender Equality prescribed by the statutory body and the university the same has been adopted at the college level. Every month sensitizing programmes, competitions and activities are conducted for the students both boys and girls on various topics. Per faculty Gender Champions are also announced who are awarded at the College Annual Day.
	NSS	For making students aware of their moral responsibility towards the society the students are encouraged to join the NSS. The NSS throughout the year conducts camps, street shows, rallies on various health related issues pertaining to both the rural and the urban areas. Students participate in it and inculcate social and moral values and responsibilities. In the process they get trained to deal and communicate with urban and rural patients.
	Environmental Sciences	The environment and its sustainability being a matter of concern and worry are dealt with through the subject of environmental sciences. Under the green audit: Energy conservation;



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B.Pharm. Course Accredited by National Board of Accreditation (NBA)

Approved by Pharmacy Council of India (PCI) & All India Council for Technical Education (AICTE), New Delhi



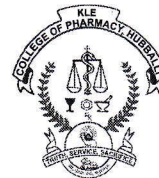


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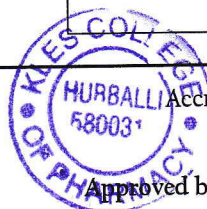
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		Installation of : Solar light, Natural ground water recharge unit, Air quality/ efforts for carbon neutrality, Green area and plantation, Waste generation, Management and disposal, E-waste management, Water management and economy of use etc.
	National Pharmacy Week Celebrations	Celebration and activities on the eve of National Pharmacy Day and the National Pharmacy Week ensures that the students are imbued with professional ethics.
Pharm D	Gender Equality	Through the programme of gender Equality prescribed by the statutory body and the university the same has been adopted at the college level. Every month sensitizing programmes, competitions and activities are conducted for the students both boys and girls on various topics. Per faculty Gender Champions are also announced who are awarded at the College Annual Day.
	NSS	For making students aware of their moral responsibility towards the society the students are encouraged to join the NSS. The NSS throughout the year conducts camps, street shows, rallies on various health related issues pertaining to both the rural and the urban areas. Students participate in it and inculcate social and moral values and responsibilities. In the process they get trained to deal and communicate with urban and rural patients.
	Environmental Sciences	The environment and its sustainability being a matter of concern and worry are dealt with through the subject of environmental sciences.
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		the students are imbued with professional ethics.
Diploma in Pharmacy	Gender Equality	Through the programme of gender Equality prescribed by the statutory body and the university the same has been adopted at the college level. Every month sensitizing programmes, competitions and activities are conducted for the students both boys and girls on various topics. Per faculty Gender Champions are also announced who are awarded at the College Annual Day.
	NSS	For making students aware of their moral responsibility towards the society the students are encouraged to join the NSS. The NSS throughout the year conducts camps, street shows, rallies on various health related issues pertaining to both the rural and the urban areas. Students participate in it and inculcate social and moral values and responsibilities. In the process they get trained to deal and communicate with urban and rural patients.
	National Pharmacy Week Celebrations	Celebration and activities on the eve of National Pharmacy Day and the National Pharmacy Week ensures that the students are imbued with professional ethics.
M. Pharm	Gender Equality	Through the programme of gender Equality prescribed by the statutory body and the university the same has been adopted at the college level. Every month sensitizing programmes, competitions and activities are conducted for the students both boys and girls on various topics. Per faculty, Gender Champions are also announced who are awarded at the College Annual Day.



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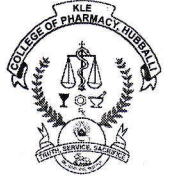


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[princpharmhbl@kledeemeduniversity.edu.in](mailto:princpharmhbl@kledeemeduniversity.edu.in)

	NSS	For making students aware of their moral responsibility towards the society, the students are encouraged to join the NSS. The NSS throughout the year conducts camps, street shows, rallies on various health related issues pertaining to both the rural and the urban areas. Students participate in it and inculcate social and moral values and responsibilities. In the process, they are trained to deal and communicate with urban and rural patients.
	National Pharmacy Week Celebrations	Celebration and activities on the eve of National Pharmacy Day and the National Pharmacy Week ensures that the students are imbued with professional ethics.



  
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## **BP 505 T. PHARMACEUTICAL JURISPRUDENCE (Theory) 45 Hours**

**Scope:** This course is designed to impart basic knowledge on important legislations related to the profession of pharmacy in India.

**Objectives:** Upon completion of the course, the student shall be able to understand:

1. The Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals.
2. Various Indian pharmaceutical Acts and Laws
3. The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals
4. The code of ethics during the pharmaceutical practice

### **Course Content:**

#### **UNIT-I 10 Hours**

##### **Drugs and Cosmetics Act, 1940 and its rules 1945:**

Objectives, Definitions, Legal definitions of schedules to the Act and Rules

Import of drugs – Classes of drugs and cosmetics prohibited from import, Import under license or permit. Offences and penalties.

Manufacture of drugs – Prohibition of manufacture and sale of certain drugs,

Conditions for grant of license and conditions of license for manufacture of drugs, Manufacture of drugs for test, examination and analysis, manufacture of new drug, loan license and repacking license.

#### **UNIT-II 10 Hours**

##### **Drugs and Cosmetics Act, 1940 and its rules 1945.**

Detailed study of Schedule G, H, M, N, P,T,U, V, X, Y, Part XII B, Sch F & DMR (OA) Sale of Drugs – Wholesale, Retail sale and Restricted license. Offences and penalties

Labeling & Packing of drugs- General labeling requirements and specimen labels for drugs and cosmetics, List of permitted colors. Offences and penalties.

Administration of the Act and Rules – Drugs Technical Advisory Board, Central drugs Laboratory, Drugs Consultative Committee, Government drug analysts, Licensing authorities, controlling authorities, Drugs Inspectors

### **UNIT-III 10 Hours**

**Pharmacy Act –1948:** Objectives, Definitions, Pharmacy Council of India; its constitution and functions, Education Regulations, State and Joint state pharmacy councils; constitution and functions, Registration of Pharmacists, Offences and 122 Penalties

**Medicinal and Toilet Preparation Act –1955:** Objectives, Definitions, Licensing, Manufacture In bond and Outside bond, Export of alcoholic preparations, Manufacture of Ayurvedic, Homeopathic, Patent & Proprietary Preparations. Offences and Penalties.

**Narcotic Drugs and Psychotropic substances Act-1985 and Rules:** Objectives, Definitions, Authorities and Officers, Constitution and Functions of narcotic & Psychotropic Consultative Committee, National Fund for Controlling the Drug Abuse, Prohibition, Control and Regulation, opium poppy cultivation and production of poppy straw, manufacture, sale and export of opium, Offences and Penalties

### **UNIT-IV 08 Hours**

**Study of Salient Features of Drugs and Magic Remedies Act and its rules:** Objectives, Definitions, Prohibition of certain advertisements, Classes of Exempted advertisements, Offences and Penalties

**Prevention of Cruelty to animals Act-1960:** Objectives, Definitions, Institutional Animal Ethics Committee, CPCSEA guidelines for Breeding and Stocking of Animals, Performance of Experiments, Transfer and acquisition of animals for experiment, Records, Power to suspend or revoke registration, Offences and Penalties

**National Pharmaceutical Pricing Authority:** Drugs Price Control Order (DPCO)-

2013. Objectives, Definitions, Sale prices of bulk drugs, Retail price of formulations, Retail price and ceiling price of scheduled formulations, National List of Essential Medicines (NLEM)

**UNIT-V 07 Hours**

**Pharmaceutical Legislations** – A brief review, Introduction, Study of drugs enquiry committee, Health survey and development committee, Hathi committee and Mudaliar committee

**Code of Pharmaceutical ethics** Definition, Pharmacist in relation to his job, trade, medical profession and his profession, Pharmacist's oath

**Medical Termination of Pregnancy Act**

**Right to Information Act**

**Introduction to Intellectual Property Rights (IPR)**

### 3.4 PHARMACEUTICAL JURISPRUDENCE (THEORY)

**Scope of the Subject:** (4-6 lines): This course exposes the student to several important legislations related to the profession of pharmacy in India. The Drugs and Cosmetics Act, along with its amendments are the core of this course. Other acts, which are covered, include the Pharmacy Act, dangerous drugs, medicinal and toilet preparation Act etc. Besides this the new drug policy, professional ethics, DPCO, patent and design Act will be discussed.

**Objectives of the Subject:** Upon completion of the subject student shall be able to

(Know, do, and appreciate) –

- a. practice the Professional ethics;
- b. understand the various concepts of the pharmaceutical legislation in India;
- c. know the various parameters in the Drug and Cosmetic Act and rules;
- d. know the Drug policy, DPCO, Patent and design act;
- e. understand the labeling requirements and packaging guidelines for drugs and cosmetics;
- f. be able to understand the concepts of Dangerous Drugs Act, Pharmacy Act and Excise duties Act; and
- g. other laws as prescribed by the Pharmacy Council of India from time to time including International Laws.

#### Course content

1. **Pharmaceutical Legislations** – A brief review.
2. Principle and Significance of professional ethics. Critical study of the code of pharmaceutical ethics drafted by PCI.
3. **Drugs and Cosmetics Act, 1940, and its rules 1945.**  
Objectives, Legal definition, Study of Schedule's with reference to Schedule B, C&C1, D, E1, F&F1, F2, F3, FF, G, H, J, K, M, N, P, R, V, W, X, Y.  
Sales, Import, labeling and packaging of Drugs And Cosmetics  
Provisions Relating to Indigenous Systems. Constitution and Functions of DTAB, DCC, CDL. Qualification and duties – Govt. analyst and Drugs Inspector.

4. **Pharmacy Act –1948.**  
Objectives Legal Definitions, General Study, Constitution and Functions of State & Central Council, Registration & Procedure, ER.
5. **Medicinal and Toilet Preparation Act –1955.**  
Objectives, Legal Definitions, Licensing, Bonded and Non Bonded Laboratory, Ware Housing, Manufacture of Ayurvedic, Homeopathic, Patent & Proprietary Preparations.
6. **Narcotic Drugs and Psychotropic substances Act-1985 and Rules.**  
Objectives, Legal Definitions, General Study, Constitution and Functions of narcotic & Psychotropic Consultative Committee, National Fund for Controlling the Drug Abuse, Prohibition, Control and regulations, Schedules to the Act.
7. **Study of Salient Features of Drugs and magic remedies Act and its rules.**
8. **Study of essential Commodities Act Relevant to drugs price control Order.**
9. **Drug Price control Order & National Drug Policy (Current).**
10. **Prevention Of Cruelty to animals Act-1960.**
11. **Patents & design Act-1970.**
12. **Brief study of prescription and Non-prescription Products.**

#### **4. Assignments:**

##### **Format of the assignment**

1. Minimum & Maximum number of pages
2. It shall be a computer draft copy
3. Reference(s) shall be included at the end.
4. Name and signature of the student
5. Assignment can be a combined presentation at the end of the academic year.
6. Time allocated for presentation may be 8+2 Min

##### **Case studies relating to**

1. Drugs and Cosmetics Act and rules along with its amendments, Dangerous Drugs Act, Medicinal and Toilet preparation Act, New Drug Policy, Professional Ethics, Drugs (Price control) Order, Patent and Design Act.

2. Various prescription and non-prescription products.
3. Medical and surgical accessories.
4. Diagnostic aids and appliances available in the market.

## **BP 206 T. ENVIRONMENTAL SCIENCES (Theory) 30 hours**

**Scope:** Environmental Sciences is the scientific study of the environmental system and the status of its inherent or induced changes on organisms. It includes not only the study of physical and biological characters of the environment but also the social and cultural factors and the impact of man on environment.

**Objectives:** Upon completion of the course the student shall be able to:

1. Create the awareness about environmental problems among learners.
2. Impart basic knowledge about the environment and its allied problems.
3. Develop an attitude of concern for the environment.
4. Motivate learner to participate in environment protection and environment improvement.
5. Acquire skills to help the concerned individuals in identifying and solving environmental problems.
6. Strive to attain harmony with Nature.

**Course content:**

### **Unit-I 10hours**

The Multidisciplinary nature of environmental studies

Natural Resources

Renewable and non-renewable resources: Natural resources and associated problems

a) Forest resources; b) Water resources; c) Mineral resources; d) Food resources; e) Energy resources; f) Land resources: Role of an individual in conservation of natural resources.

### **Unit-II 10hours**

Ecosystems

Concept of an ecosystem.

Structure and function of an ecosystem.

Introduction, types, characteristic features, structure and function of the ecosystems: Forest ecosystem; Grassland ecosystem; Desert ecosystem; Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

### **Unit- III 10hours**

Environmental Pollution: Air pollution; Water pollution; Soil pollution



# ENVIRONMENTAL STUDIES

## GOAL:

The students should gain knowledge to understand the multidisciplinary nature of the environment and the awareness of the eco system, which maintains the natural environment.

## OBJECTIVES:

### a) KNOWLEDGE

At the end of the B.Sc. 2<sup>nd</sup> year Course the student is expected to know:

1. The natural resources like forest, water, mineral, food, energy and land.
2. Functions of the eco system.
3. Bio-diversity and its conservation.
4. Environmental pollution & its prevention.
5. Social issues.

### b) SKILLS

At the end of the 1<sup>st</sup> B.Sc. Course the student is expected to:

1. Visit local areas to understand and document environmental assets like river, forest, grassland, hill and mountain.
2. Visit an industrial area or agricultural area to know about local pollutants.
3. Identify common plants, insects and birds in their local areas.
4. Identify rivers, hills and mountains in their local areas.
5. To make use of the knowledge to protect natural resources.

## COURSE CONTENTS

### Theory and Field work : 50 Hours

- Theory – 45 hours
- Field work – 5 hours

**1. Multi-disciplinary nature of environmental studies**

Definition, scope and importance, need for public awareness.

2 hour

**2. Natural Resources:**

**Renewable and non-renewable resources:**

Natural resources and associated problems.

8 hour

- a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.
- b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- e) Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
- f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
  - Role of an individual in conservation of natural resources.
  - Equitable use of resources for sustainable lifestyles

**3. Ecosystems**

6 hours

- Concept of an ecosystem.
- Structure and function of an ecosystem.
- Producers, consumers and decomposers.
- Energy flow in the ecosystem.
- Ecological succession.



- Food chains, food webs and ecological pyramids.
- Introduction, types, characteristic features, structure and function of the following ecosystems:-
  - a. Forest ecosystem
  - b. Grassland ecosystem
  - c. Desert ecosystem
  - d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

#### 4. **Biodiversity and its conservation**

**8 hours**

- Introduction – Definition : genetic, species and ecosystem diversity.
- Biogeographical classification of India.
- Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as a mega-diversity nation.
- Hot-spots of biodiversity.
- Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India
- Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.

#### 5. **Environmental Pollution**

**8 hours**

Definition

- Cause, effects and control measures of:-
  - a. Air pollution
  - b. Water pollution
  - c. Soil pollution
  - d. Marine pollution
  - e. Noise pollution

- f. Thermal pollution
- g. Nuclear hazards
- Solid waste Management : Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Pollution case studies.
- Disaster management : floods, earthquake, cyclone and landslides.

## 6. Social Issues and the Environment

7 hours

- From Unsustainable to Sustainable development
- Urban problems related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns.  
Case Studies
- Environmental ethics : Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies.
- Wasteland reclamation.
- Consumerism and waste products.
- Environment Protection Act.
- Air (Prevention and control of Pollution) Act.
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation.



## 7. Human Population and the Environment

6 hours

- Population growth, variation among nations.
- Population explosion – Family Welfare Programme.
- Environment and human health.
- Human Rights.
- Value Education.
- HIV/AIDS
- Women and Child Welfare.
- Role of Information Technology in Environment and human health.
- Case Studies.

## 8. Field work

- Visit to a local area to document environmental assets river/forest/grassland/hill/mountain
- Visit to a local polluted site – Urban / Rural/ Industrial/Agricultural
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5 lecture hours)

### SCHEME OF EXAMINATION

#### A. Theory : 80 Marks

- |                 |             |
|-----------------|-------------|
| ❖ Long Essay    | 2 X 10 = 20 |
| ❖ Short Essay   | 8 X 5 = 40  |
| ❖ Short Answers | 5 X 4 = 20  |

#### B. Field Work: 20 Marks

The institution will conduct theory examination at the end of 2<sup>nd</sup> year Pharm-D

**Recommended Books Latest Edition :**

<b>Sl No.</b>	<b>Title</b>	<b>Author</b>	<b>Publisher</b>
1	Environmental Biology	Agarwal, K.C.	Nidi Publ. Ltd. Bikaner
2	The Biodiversity of India	Bharucha Erach	Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013
3	Environmental Encyclopedia	Cunningham W.P., Copper T.H., Gorhani E. & Hepworth M.T.	Jaico Publ. Hose, Mumbai
4	Global Biodiversity Assessment	Heywood, V.H. & Waston R.T.	Cambridge University Press
5	Environmental Protection and Laws	Jadhav H. & Bhosale V.M.	Himalaya Publ. House Delhi
6	Environmental Science Systems & Solutions	Mckinney M.L. & School R.M.	Himalaya Publ. House Delhi





# INSTITUTE OF PHYSIOTHERAPY

A Constituent Unit of

**KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH**

(Declared as Deemed -to-be-University u/s 3 of the UGC Act, 1956)

Accredited 'A' Grade by NAAC (2<sup>nd</sup> Cycle)

Placed in Category 'A' by MHRD (Gol)

NEHRU NAGAR, BELAGAVI - 590010, KARNATAKA, INDIA

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Ref.No/KAHER/ KIPT/2019-20/ 138/A

Date: 11/06/2019

***Institution integrates crosscutting issues relevant to Gender, Environment and Sustainability, Human Values, Health Determinants, Right to Health Issues, Emerging demographic changes and Professional Ethics in the curricula***

The curriculum is well established and well structured keeping in mind the various issues the society is facing at the present scenario. The institution follows the guidelines of IAP and KLE University for developing curriculum.

In the Undergraduate level Environmental studies as a subject, where the aim of the subject is to enable the students to understand the importance of environmental sanctity, ecosystem, biodiversity, pollution, population and environment and deals with renewable and non-renewable resources like natural resources and associated problems, Biodiversity and its conservation.

The Institute conducts a regular program for the students and by the students, called "Right Life and Life Right" where the students speak about various issues of the nation and global problems, the program is conducted once in a week per class.

For 1st year UG students, psychology and sociology subjects has been included and the main objective of those subjects is to enable the student understand the specific psychological factors and their effects in physical illness this will aid them to have a holistic approach in dealings with their patients during admission, treatment, rehabilitation and discharge and to enable the student understand the basic sociology concepts, principles and social process, social

institutions (in relation to the individual, family and community) and the various social factors affecting the family in rural and urban communities in India

Medico legal issues and ethics are as a part of both UG & PG curriculum, where the students are sensitized to the Consumer Protection Act and Constitution of India. The students deal with ethics and patient care value in theory and clinical setting. At regular intervals of time, the faculty and students are updated about ethics and medico legal issues faced in the country. Evidence based Practice is a subject which helps to inculcate moral, ethical values and citizenship roles in students. It mainly deals with Clinical practice guidelines, analysis of latest evidence, Reality and myths about evidence practice and about funding information. The students apply the knowledge gained in theory, to practice during internship, PG program and during future practice.



*Sanjiv Kumar*

Principal  
KLE.Institute of Physiotherapy  
Belagavi



## 1.3 Curriculum Enrichment

### 1.3.1 Institution integrates crosscutting issues relevant to Gender, Environment and Sustainability, Human Values, Health Determinants, Right to Health Issues, Emerging demographic changes and Professional Ethics in the curricula

Yes, Institution integrates crosscutting issues relevant to Gender, Environment and Sustainability, Human Values, Health Determinants, Right to Health Issues, Emerging demographic changes and Professional Ethics in the curricula

Cross cutting issues	Supporting curricula and extra-curricular activities conducted to address cross cutting issues by the institute
<b>Gender</b>	1. The nursing profession has not been immune from gender inequality as the profession remains predominantly female.
	2. Numbers of female faculty are appointed in college, who are a part of decision making, implementation and monitoring of policies.
	3. Gender socialization of boys and girls begins early, and it is important to initiate change processes at young, which is a part of gender champion programme. One female student from B.Sc (N) III year selected as Gender champion for the academic year 2018-19. Nodal teacher is appointed for facilitating Annual calendar activities is also a female faculty.
	4. Awareness on Menstrual Hygiene for High school girls, Menopause and its management for women, Prevention of Anemia in adolescent girls, Ca cervix and Ca Breast among reproductive women, Distribution of Newborn baby Kit and Health education, Poster exhibition on importance on "Breast Feeding" are regular activity conducted for community population
	5. Lady Counselor is appointed by the university to address student's issues, who visits college twice a week.
	6. Sexual Harassment and Redressal cell is existing at college to address the issues of female faculty and students.
	7. Sanitary pad vending machine is made available in girl's common room.
<b>Environment and Sustainability</b>	1. As prescribed in the curriculum of the KAHER, INS, students of Second year B.Sc Nursing have Environmental studies course in the curriculum, which helps to create awareness about the natural resources and associated problem, ecosystem, biodiversity and its conservation, environmental pollution, social issues and environment, human population, environment and field visit.
	2. Swachh Bharat Abhiyan is a regular activity conducts every Friday for two hrs to keep surrounding environment clean and make students and Society aware towards their responsibility to community and country.
	3. NSS unit of KAHER INS conducts Awareness Programme on Solid Waste Segregation practices, street cleaning drive, Tree Plantation, cleanliness drive to educate people regarding environment and prevention of environmental pollution.



	<ol style="list-style-type: none"> <li>4. Plastic free zone is strictly followed in the campus</li> <li>5. LEDs and CFLs are used to save energy.</li> <li>6. E-waste disposal, saving energy, proper ventilation, optimal use of energy are few of the highlights about environment consciousness at the institute</li> </ol>
<b>Human values</b>	<ol style="list-style-type: none"> <li>1. Anti-ragging and Grievance Redressal Committee monitors the matters of conduct and discipline. The institute has an anti-ragging committee comprising of faculty representatives to avoid an undue incidences of ragging either in college or in hostel.</li> <li>2. Institute conducts blood donation camp as a social activity</li> <li>3. Student council of the institute conducts activities such as celebration of Ganesh festival, Onam, Christmas, Teachers day, Nurses day etc</li> </ol>
<b>Health determinants</b>	<ol style="list-style-type: none"> <li>1. Community Health Nursing course covers the topics such as the social and economic environment, physical environment, and the Person's individual characteristics and behaviors.</li> <li>2. Department of Community health nursing conducts Guest lecture on the occasion of World Health day</li> </ol>
<b>Right to health issues</b>	<ol style="list-style-type: none"> <li>1. Faculty gets medical leaves for health issues with authenticated medical certificate.</li> <li>2. Maternity leave is made available for female faculty for 6 months during pregnancy and after delivery.</li> </ol>
<b>Emerging demographic changes</b>	<ol style="list-style-type: none"> <li>1. Community Health Nursing course describes the concepts and scope of demography, demographic rates and ratios, population and its control</li> </ol>
<b>Professional ethics</b>	<ol style="list-style-type: none"> <li>1. Nursing students take oath during lamp lighting and oath taking ceremony to make student aware of their duties as nurse towards the patients</li> <li>2. Nursing foundation course helps the students to develop an understanding of Nursing as a profession. It also describes the values, code of ethics and professional conduct for nurses of India.</li> </ol>

*Sudha*

Principal

KAHER Institute of Nursing Sciences  
Belagavi.

### 1.3.1.2 Description of the courses address crosscutting issues

Name of the programme	Name of the course	Description
B.Sc (N) 1 <sup>st</sup> year	Nursing foundation	Describes the ethics of the nursing profession
P.B.B.Sc (N) 1 <sup>st</sup> year		
B.Sc (N) 3 <sup>rd</sup> year	Mental Health Nursing	
B.Sc (N) 4 <sup>th</sup> year	Management of nursing services and education	
M.Sc (N) 1 <sup>st</sup> year	Advanced nursing practice	
M.Sc (N) 1 <sup>st</sup> year	Nursing Research	
M.Sc (N) 1 <sup>st</sup> year	Nursing management	
B.Sc(N)2 <sup>nd</sup> year	Community Health Nursing	Describes the factors that determine individual and population health
M.Sc(N)1 <sup>st</sup> year		
B.Sc(N)2 <sup>nd</sup> year	Sociology	Describes concepts of sociology related to community and social institutions.
M.Sc (N)1 <sup>st</sup> year	Community Health Nursing	
B.Sc(N)3 <sup>rd</sup> year	Child Health Nursing	Describes the concept of Right to health issues
P.B.B.Sc (N) 1 <sup>st</sup> year		
M.Sc (N)1 <sup>st</sup> year		
B.Sc (N) 2 <sup>nd</sup> year	Environmental studies	Describes the Environment and sustainability
B.Sc(N)2 <sup>nd</sup> year	Sociology	Describes the Gender, family, marriage and society
B.Sc (N) 1 <sup>st</sup> year	Nursing foundation	Describes the Human values
P.B.B.Sc (N) 1 <sup>st</sup> year		

## LAW – INDIAN CONSTITUTION

**GOAL:**The students should gain the knowledge and insight into the Indian Constitution so that they are aware of the fundamental rights and freedom bestowed through the democratic governance of our country.

### OBJECTIVES:

#### a) Knowledge:

At the end of the course the student is expected to know:

- Basic knowledge of the Indian Constitution.
- Democratic Institutions created by the Constitution.
- Special right created by the Constitution for regional and linguistic minorities.
- Election Commission.
- Legislative, Executive and Judicial powers and their functions in India.

#### b) Skills:

At the end of the course the student is expected to make use of knowledge:

- To perform his/her duties towards the society.
- Judiciously and with conscious effort for self-development.
- To utilize state policies in their future practice.

**Duration of the Module: Module will be taught in 1<sup>st</sup> Year BHMS.**

**Attendance and Progress:** A minimum of 75% of the attendance is required to be eligible to appear for examination, provided his/her progress and conduct are counted to be satisfactory by the Principal.

**Examination:** Examination will be conducted as Institutional Examination along with 1<sup>st</sup> Internal Assessment Examination for 2 hours duration and marks will be added in the University marks card of 1<sup>st</sup> year BHMS. However, these marks will not be considered for declaration of results of 1<sup>st</sup> year BHMS.

### Theory Question paper pattern

Sl. No	Division	No. of Questions	Marks per Question	Total Marks	Grand Total
1	MCQ	10	1	10	50
2	Long Essay Question	01	10	10	
3	Short Essay Questions	03	5	15	
4	Short Answers	05	3	15	

**Criteria for Pass:**

- A candidate must obtain 35% marks (18 marks) to declare as pass.
- Failed candidates must appear supplementary examination along with subsequent Internal Assessment Examination.
- The result of the 1<sup>st</sup> Year BHMS examinations will be withheld in case if the student fails to pass the subject.
- The marks will not be considered for declaration of University Rank / Distinction / Class.

\*\*\*\*\*

## **BHMS – 2<sup>nd</sup> YEAR**

### **FORENSIC MEDICINE AND TOXICOLOGY**

#### **INSTRUCTIONS:**

- (a) Medico-legal examination is the statutory duty of every registered Medical Practitioner, whether he is in private practice or engaged in Government sector and in the present scenario of growing consumerism in medical practice, the teaching of Forensic Medicine and Toxicology to the students is highly essential.
- (b) This learning shall enable the student to be well-informed about medico-legal responsibility in medical practice and he shall also be able to make observations and infer conclusions by logical deductions to set enquire on the right track in criminal matters and connected medico-legal problems.
- (c) The students shall also acquire knowledge of laws in relation to medical practice, medical negligence and codes of medical ethics and they shall be capable of identification, diagnosis and treatment of the common poisonings in their acute and chronic state and also dealing with their medico-legal aspects.
- (d) For such purposes, students shall be taken to visit district courts and hospitals to observe court proceedings and post-mortem as per Annexure 'B'.

#### **OBJECTIVES:**

At end of the course the student shall:

1. Be acquainted with medico-legal procedures, medical ethics and various provisions of Consumer Protection Act.
2. Be competent to handle medico-legal cases apart from giving evidence in such cases whenever required.
3. Have the knowledge of toxicology to identify the poison and adopt necessary emergency measures.
4. Expand his knowledge of Materia Medica by incorporating the knowledge gained through the study of Toxicology.
5. Demonstrate basic knowledge of relevant sections of penal code.
6. Demonstrate awareness of inquest, legal and court procedures applicable to medico-legal and medical practice.

7. Demonstrate awareness of code of ethics, duties & rights of medical practitioner, duties towards patients, society, punishment on violation of code of ethics, various forms of medical negligence and duties towards his / her professional colleagues.

## Course Content:

### A. Theory: 80 Hours

Forensic Medicine – 50 Hours, Toxicology - 28 Hours

Legislation relating to Medical Profession: 2 Hours

Sl. No	Topic / chapters	Hours allotted	Marks
I.	<b>Forensic Medicine</b>	<b>50 hours</b>	<b>67</b>
1	<p><b>Introduction</b></p> <p>(a) Definition of Forensic Medicine, Medical jurisprudence            (b) History of Forensic Medicine in India            (c) Medical Ethics and Etiquette            Medical ethics, medical etiquette forensic pathology.            Functions of CCH, meaning of penal erasure or professional death sentence , reasons for awarding it, warning notice, duties of medical practitioner, privileged communication meaning with examples            (d) Duties of registered Medical Practitioner in medico-legal-cases            Professional secrecy meaning with examples, definition of professional negligence or malpraxis, infamous conduct, contributory negligence, vicarious liability, objects of medical records, definition of consent, types of consent, informed consent, locoparentis, malingering</p>	4 hrs	5
2	<p><b>Legal Procedure</b></p> <p>(a) Inquests, courts in India, legal procedure            Inquest definition, police inquest, magistrate inquest, courts of law &amp; their powers, cognizable offences (as per S2(c) Cr. P. C) summons, definition of conduct money.            (b) Medical evidence in courts, dying declaration, dying deposition, including medical certificates and medico-legal reports. Types of documentary evidence, dying declaration, chain of custody, common, expert, hostile witness, procedure of record of evidence.</p>	4 hrs	5
3	<p><b>Personal identification</b></p> <p>(a) Determination of age and sex in living and dead; race, religion.            Definition of identification, need for identification, meaning of corpus delicti, identification data, determination of Race, cephalic index formula, need for determination of sex, sex chromatin/ barr body definition, intersex definition &amp; types, differences between male skull &amp; female skull, male &amp; female pelvis, male &amp; female mandible, male &amp; female femur, differences between permanent &amp; temporary teeth, determination of age from teeth, medico legal importance of age, rule of Haase,            (b) Dactylography, DNA finger printing, foot print.            anthropometry, finger print definition, ridges types, techniques of finger printing,</p>	7 hrs	10

	<p>types of finger print, medico legal importance of finger prints, scars- definition, characters, medico-legal importance.</p> <p>Tattoo marks- definition dyes used, complication, duration, &amp; erasure of tattoo &amp; medico legal importance.</p> <p><b>(c)</b> Medico-legal importance of bones, scars and teeth,tattoo marks, handwriting,anthropometry.</p> <p>Medico legal importance of eyes, hair &amp; teeth. Difference between animal &amp; human hair, Medullary index of bones, age determination as a whole age determination of foetus.</p> <p><b>(d)</b>Examination of biological stains and hair</p>		
<b>4</b>	<p><b>Death and its medico-legal importance</b></p> <p><b>(a)</b> Death and its types, their medico-legal importance Death &amp; its types, medico legal aspects of death, Brain death, modes of death, manner of death, classification of cause of death</p> <p><b>(b)</b> Signs of death (1) immediate, (2) early (3) late and theirmedico-legal Importance and methods to preserve the dead body.</p> <p><b>(c)</b> Asphyxial death (mechanical asphyxia and drowning) Asphyxial death – asphyxia definition, causes &amp; types of asphyxia, stages of asphyxia, signs of asphyxia, mechanism &amp; pathophysiology of drowning, post mortem changes in asphyxia. Hanging, strangulation, throttling – definition, types, causes of death, fatal period, post mortem appearance medico legal aspects. Definition of suffocation, smothering, gagging, overlaying, choking, traumatic asphyxia. post mortem changes, medico legal aspects Drowning – definition, types, causes of death, post mortem changes medico legal aspects.</p> <p><b>(d)</b> Deaths from starvation, cold and heat etc. Starvation – types, symptoms, fatal period, factors influencing the fatal period, cause of death, post mortem changes.</p>	13 hrs	13
<b>5</b>	<p><b>Injury and its medico-legal importance</b></p> <p>Mechanical, thermal, firearm, regional, transportation and traffic injuries; injuries from radiation, electrocution and lightening. Injury – definition, classification Abrasion –definition, types, age of abrasion, medico legal importance Contusions – definition, factors modifying size &amp; shape, age of bruise, patterned bruising. Laceration – definition, types, characters, medico legal importance. Incised wound – definition, characters, medico legal importance, age of incised wound, chop wound. Stab wound – definition, characters, medico legal importance. Defence &amp; self-inflicted wound Fire arm injuries, character of entry wound in contact, difference between entrance &amp; exit wound. Suicidal, homicidal, accidental firearm injuries. Regional injuries – types of fracture skull, coup &amp; contre coup lesion, difference between drunkenness &amp; concussed, lucid interval. Thermal injury – Burns – Wilsons degree of burns, rule of nine, causes of death, post mortem appearance, difference between ante mortem &amp; post mortem burns, dry heat, moist heat differences</p>	8 hrs	09
<b>6</b>	<p><b>Forensic Psychiatry</b></p> <p><b>(a)</b> Definition; delusion, delirium, illusion, hallucinations;</p>	3 hrs	5



	Impulse and mania; classification of insanity, phobia & medico legal importance, <b>(b)</b> Development of insanity, diagnosis, admission to mental asylum Classification of insanity, differences between real & feigned insanity, lucid interval, mental disorder & responsibility.		
<b>7</b>	<b>Post-mortem examination (autopsy)</b> <b>(a)</b> Purpose, procedure, legal bindings; difference between pathological and Medico-legal autopsies. Autopsy – definition., objects, rules, types of skin incision, Exhumation. <b>(b)</b> External examination, internal examination of adult, foetus and skeletal remains.	2 hrs	3
<b>8</b>	<b>Impotence and sterility</b> Impotence; Sterility; Sterilization; Artificial Insemination; Test Tube Baby; Surrogate mother, Definition of impotence, sterility, Sterilization definition, artificial insemination definition, legal problems. Surrogate motherhood, situation where question of impotency & sterility arises. Legitimacy & paternity.	2 hrs	3
<b>9</b>	<b>Virginity, defloration; pregnancy and delivery</b> Definition of virgin, defloration & differences, types of hymen, causes of rupture of hymen, medico legal aspects Superfecundation, superfetation, Legitimacy definition, medico legal aspects of legitimacy.	3 hrs	3
<b>10</b>	<b>Abortion and infanticide</b> <b>(a)</b> Abortion: different methods, complications, accidents following criminal abortion, MTP. Legal definition of abortion, criminal abortion, difference between natural & criminal abortion, Methods of procuring criminal abortion, <b>(b)</b> Infant death, legal definition, legitimacy, legal definition of infanticide, criminal causes of death infant, viability of foetus, stillborn definition, Battered baby syndrome, Cot death.	2 hrs	8
<b>11</b>	<b>Sexual Offences</b> Rape, incest, sodomy, sadism, masochism, tribadism, bestiality, buccal coitus and other sexual perversions. Define sexual offences, classify sexual offences, define Rape as per Sec 375 & 376 IPC, define statutory Rape, Marital Rape, rape trauma syndrome, Define indecent assault as per Sec 354, adultery, Paedophilia, paraphilia.	2 hrs	3

Sl. No	Topic / chapters	Hours allotted	Marks
II.	<b>Toxicology</b>	<b>28</b>	<b>33</b>
1.	<p><b>General Toxicology</b></p> <p>(a) Forensic Toxicology and Poisons Definition of Toxicology, poison, clinical toxicology and antidote characters of ideal homicidal and suicidal poison, classification of poison as per the mode of action, routes of administration of poison, fate of poison in the body, routes of elimination of poison from the body, actions of poison, causes or factors modifying action of poisons, types of poisoning.</p> <p>(b) Diagnosis of poisoning in living and dead subjects, reasons for failure to detect poison in the body, duties of medical practitioner in a case of suspected poisoning, treatment of poisoning,</p> <p>(c) General principles of management of poisoning</p> <p>(d) Medico-legal aspects of poisons</p> <p>(e) Antidotes and types -types of antidotes and its uses, universal antidote constituent and its uses, preservation of viscera &amp; other materials &amp; preservatives to be used.</p>	6 hrs	6
2.	<p><b>Clinical toxicology - (a) Types of Poisons;</b></p> <p><b>(i) Corrosive poisons</b> (Mineral acids, Caustic alkalis, Organic acids, Vegetable acids, Sulphuric acid, hydrochloric acid, nitric acid, oxalic acid, carbolic acid &amp; caustic alkalis- action, signs &amp; symptoms, fatal dose, fatal period, causes of death, post mortem finding, circumstances or medico legal of poisoning.</p>	5 hrs	3
	<p><b>(ii) Irritant poisons (Organic poisons – vegetable and animal, Inorganic poisons- metallic and non-metallic Mechanical poisons)</b> Arsenic, lead – action, signs &amp; symptoms, fatal dose, fatal period, post mortem findings, circumstances of poisoning. Differentiate arsenic poisoning from cholera Phosphorus- action, signs &amp; symptom, fatal dose, fatal period, post mortem findings, circumstances of poisoning. Powdered glass, needles, hair etc- signs &amp; symptoms, post mortem findings, medico legal aspects. Treatment of mechanical poisoning. Ricinus communis, Abrus precator ius, capsicum , calotropis, anacardium – action, physical characteristics, alkaloids, signs &amp; symptoms, post mortem findings, circumstances of poisoning. Powdered glass, needles, hair etc- signs &amp; symptoms, post mortem findings, medico legal aspects. Treatment of mechanical poisoning. Ricinus communis, Abrus precator ius, capsicum , calotropis, anacardium – action, physical characteristics, alkaloids, signs &amp; symptoms, post mortem findings, circumstances of poisoning. Treatment in capsicum, anacardium, calotropis ricinus communis poisoning. Differences between poisonous snakes from non-poisonous snakes, action of venom, signs &amp; symptoms, post mortem findings, circumstances of poisoning, first aid treatment, Scorpions – action, signs &amp; symptoms, post mortem findings.</p>	6 hrs	6

	<p><b>(iii) Asphyxiant poisons (Carbon monoxide; Carbon dioxide; Hydrogen sulphide and some war gases)</b> Carbon monoxide &amp; carbon dioxide – action sources, signs &amp; symptoms, post mortem findings, circumstances of poisoning &amp; treatment.</p>	1 hr	3
	<p><b>(iv) Agricultural Poisons</b> – Organophosphorous poison, Organophosphorus compounds action signs &amp; symptoms, fatal period, diagnosis, causes of death, post mortem findings, prophylaxis, medico legal aspects.</p>	2 hrs	3
	<p><b>(v) Neurotic poisons</b> (Opium, Nux vomica, Alcohol, Fuels like kerosene and petroleum products, Cannabis indica, Dhatura, Anaesthetics Sedatives and Hypnotics, Agrochemical compounds, Belladonna, Hyoscyamus, Curare, Conium) Ethyl alcohol –action, signs &amp; symptoms, fatal dose, fatal period, post mortem findings, medico legal aspects, hazards of alcohol, define drunkenness, Opium – alkaloids, action signs &amp; symptoms, fatal dose, fatal period, diagnosis of post mortem findings, medico legal importance, Datura , Hyoscyamus &amp; Belladonna- action, signs &amp; symptoms, fatal dose, fatal period, post mortem findings, medico legal aspects, Cannabis Indica – action, sources or forms in which it is used, signs &amp; symptoms, fatal dose, fatal period, circumstances of poisoning. Cocaine – action, signs &amp; symptom, fatal dose, fatal period, post-mortem findings, circumstances of poisoning, Nux vomica –action, signs &amp;symptoms, fatal dose, fatal period, difference between strchynine poisoning &amp; tetanus, circumstances of poisoning,</p>	4 hrs	3
	<p><b>(vi) Cardiac poisons</b> (Digitalis purpurea, Oleander, Aconite, Nicotine) Digitalis, aconite, tobaccum -action, signs &amp; symptoms, fatal dose, fatal period, post mortem findings, circumstances of poisoning. Nerium odorum (white &amp; yellow) – signs &amp; symptoms, fatal dose, fatal period, post mortem findings, circumstances of poisoning.</p>	3 hrs	3
	<p><b>(vii) Miscellaneous poisons</b> (Analgesics and Antipyretics, Antihistaminics, Tranquillisers, antidepressants, Stimulants, Hallucinogens, Street drugs, food poison etc.)</p>	1 hr	3
<b>III.</b>	<p><b>Legislation relating to Medical Profession</b> (a) The Homoeopathy Central Council Act, 1973 (59 of 1973) (b) The Consumer Protection Act, 1986 (68 of 1986) (c) The Workmen's Compensation Act, 1923 (8 of 1923) (d) The Employees State Insurance Act, 1948 (34 of 1948) (e) The Medical Termination of Pregnancy Act, 1971 (34 of 1971) (f) The Mental Health Act, 1987 (14 of 1987) (g) The Indian Evidence Act, 1872 (1 of 1872)</p>	<b>2 Hrs</b>	3

	<ul style="list-style-type: none"> <li>(h) The Prohibition of Child Marriage Act, 2006 (6 of 2007)</li> <li>(i) The Personal Injuries Act, 1963 (37 of 1963)</li> <li>(j) The Drugs and Cosmetics Act, 1940 (23 of 1940) and the rules made therein;</li> <li>(k) The Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954 (21 of 1954)</li> <li>(l) The Transplantation of Human Organs Act, 1994 (42 of 1994);</li> <li>(m) The Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 (57 of 1994);</li> <li>(n) The Homoeopathic Practitioners (Professional Conduct, Etiquette and Code of Ethics) Regulations, 1982;</li> <li>(o) The Drugs Control Act, 1950 (26 of 1950)</li> <li>(p) The Medicine and Toiletry preparations (Excise Duties) Act, 1955 (16 of 1955)</li> <li>(q) The Indian Penal Code (45 of 1860) and the Criminal Procedure Code (2 of 1974) relevant Provision.</li> <li>(r) The persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (1 of 1996)</li> <li>(s) The Clinical Establishment (Registration and Regulation) Act, 2010 (23 of 2010)</li> </ul>		
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**B. Practical: 40 hours**

**1. Demonstration: 35 Hrs**

(a) Weapons – **5 hrs**

(b) Organic and inorganic poisons – **5 hrs**

(c) Poisonous plants – **5 hrs**

(d) Charts, diagrams, photographs, models, x-ray films of medico-legal importance – **5 hrs**

(e) Record of incidences reported in newspapers or magazines and their explanation of medico-legal importance – **5 hrs**

(d) Attending demonstration of ten medico-legal autopsies – **10 hrs**

**2. Certificate Writing: 5 hrs**

Various certificates like sickness certificate, physical fitness certificate, birth certificate, death certificate, injury certificate, rape certificate, chemical analyzer (Regional Forensic Laboratory), certificate for alcohol consumption, writing post-mortem examination report.

## SCHEME OF EXAMINATION

### A. Theory:

Number of Paper : 01  
Maximum Marks : 100

#### Types of Question with Marks

Type of Questions	No. of Questions Asked	No. of Questions to be attempted	Marks per Question	Total
Long Essays	02	02	10	20
Short Essays	12	10	05	50
Short Answers	10	10	03	30
<b>Maximum Marks</b>				<b>100</b>

### B. Practical including Viva-voce or Oral

Maximum Marks =100

#### 1. Practical : 50 Marks

Sl. No	Skill	Marks
1	Practical record/Journal	10
2	Certificate writing	5
3	Instruments –one spotter	10
	Weapons – one spotter	
4	Inorganic poisons-one spotter	5
5	Charts, diagrams, photographs, models, x-ray films of medico-legal importance	5
6	Poisonous plants/vegetable poisons – one spotter	10
	Animal poisons – one spotter	
7	Bones/Specimens –one spotter	5

**Each spotter/specimen division of marks (where ever is applicable)**

1. Identification – 1 mark
2. Medico legal importance – 2 marks
3. Discussion – 2 marks

## 2. Viva Voce or (Oral) Examination - 50 Marks

### MARKS DISTRIBUTION

Subject	Theory		Practical & Oral				Grand Total	
	Max Marks	Pass Marks	Max Practical Marks	Max Oral Marks	Total Practical & Oral	Pass Marks	Max Marks	Pass Marks
Forensic Medicine & Toxicology	100	50	50	50	100	50	200	100

### RECOMMENDED BOOKS

Sl. No	Name of the Book	Author	Publisher
1.	Modi's Medical Jurisprudence & Toxicology	Modi	A.S.Pandya. N.M. Tripathi Pvt. Ltd.
2.	Forensic Medicine & Toxicology Vol. I & II (4 <sup>th</sup> Edition) - 2011	J.B.Mukherjee	Academic Publishers, Kolkata
3.	Parikh's Text book of Medical Jurisprudence, Forensic Medicine and Toxicology (6 <sup>th</sup> Edition) –(2012)	Parikh	CBS Publisher & Distributors, New Delhi
4.	Hand book of Forensic Medicine & Toxicology	K.Krishnan	Khotari books, Hyderabad
5.	Synopsis of Forensic Medicine & Toxicology (28 <sup>th</sup> Edition) (2014).	K.S. Narayana Reddy	Jaypee Brothers Medical Publishers. New Delhi.
6.	Medical Ethics, II Ed., 2004	Francis C. M	Jaypee Brothers, New Delhi.
7.	CCH Regulations and Acts Govt of India	----	CCH, New Delhi 1973.
8.	The essential of Forensic Medicine & Toxicology (33 <sup>rd</sup> Edition) - (2015)	Reddy KSN, Murthy OP	Jaypee Brothers Medical Publishers. New Delhi.

### REFERENCE BOOKS

Sl. No	Name of the Book	Author	Publisher
1.	Colour Atlas of Forensic Medicine (2 <sup>nd</sup> edition)	Govindiah D	Jaypee brothers Medical Publishers. New Delhi
2.	Modi A Text book Of Medical Jurisprudence & Toxicology (24 <sup>th</sup> edition)	Mathiharan. K & Amrit K Patnaik	Lexis Nexis Butterworth's India
3.	Practical Forensic Medicine (3 <sup>rd</sup> edition)	Nagesh Kumar G. Rao	Jaypee brothers Medical Publishers. New Delhi
4.	Text book of Forensic Medicine & Toxicology (2 <sup>nd</sup> edition)	Nagesh Kumar G. Rao	Jaypee brothers Medical Publishers. New Delhi
5.	Modern Medical Toxicology (4 <sup>th</sup> edition)	Pillay V. V	Jaypee Brothers medical publishers. New Delhi

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