



**RVP RISHIKA VARUN PAWAR FOUNDATION**  
**DR S PAWAR INSTITUTE OF**  
**PARAMEDICAL SCIENCES COLLEGE**  
**AFFILIATED TO TELANGANA PARAMEDICAL BOARD**  
**Recognition Certificate. No. 139/01/10/TSPMB/2023**



# **CURRICULUM**

**ADDRESS :2-151/1,MAVALA ADILABAD, TELANGANA STATE - PIN CODE - 504002**

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# DR S PAWAR INSTITUTE OF PARAMEDICAL SCIENCES COLLEGE



## MAVALA - ADILABAD



Recognition Certificate. No. 139/01/10/TSPMB/2023  
**TELANGANA PARAMEDICAL BOARD**

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**DRGA DOA DMLT DMPHA(Male)**



**RVP RISHIKA VARUN PAWAR FOUNDATION  
DR S PAWAR DIAGNOSTIC AND RESEARCH CENTRE**



# DR S PAWAR INSTITUTE OF PARAMEDICAL SCIENCES COLLEGE



## DR S PAWAR INSTITUTE OF PARAMEDICAL SCIENCES COLLEGE

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**Estd .2023**



**RVP Rishika Varun Pawar Foundation**

**DR.S PAWAR INSTITUTE OF  
PARAMEDICAL SCIENCES COLLEGE  
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**College Address: HNo. 2-151/1, MAVALA  
ADILABAD, TELANGANA-504002**



**Provided by**  
**TELANGANA STATE PARA MEDICAL BOARD**  
**HYDERABAD, TELANGANA**



**SYLLABUS**  
**DMPHA**

**Theory Papers 3 + Practical papers 3**  
**6 Months Internship Training followed by**  
**100% Jobplacement assurance**

**Sub Topics ( Part - A,B,C& D ) of all papers I, II & III Three**  
**Hoursof theory , two hours of tutorial and weekly practical**  
**sessions for a duration of 2 years diploma 30 - 36 weeks**

## **INTRODUCTION**

# **DMPHA**

“The Science is devolving different branches of specialization and Medical Sciences are closely linked with each other scientific Medicine has been nurtured and grown to the present form in the hospitals and nursing homes. It is the knowledge gained in the technology that makes human diseases feasible, their treatment and subsequent follow us success.

Sometime it can harm the patient seriously; mainly the hospitals. Thus the multipurpose health Technician plays a vital role in the Medicine field .It is difficult for the doctor alone.

In Fact it is necessary that every department in General Hospital Primary health centre at Taluk level, every Hospital belonging to state / Centre Govt. and all clinics & Nursing Homes & Practitioners should have the assistance of trained technician.

So A gap has been developed between the requirement and the availability of trained

To fulfil the gap and to make the Para medical Board of India has realized the problems and start training course in multipurpose health assistants.

**RVP GROUPS**

RVP RISHIKA VARUN PAWAR FOUNDATION

## DMPHA - I & II Year

Paper	SUBJECTS	(MAX. MARKS)		TOTAL	PASS MARKS	PRACTICAL MARKS	PASS MARKS
		INTERNAL	EXERNAL	100	40	60	24
I	A & B :ANATOMY & PHYSIOLOGY C: BASICS OF BIOCHEMISTRY D: BASICS OF BIostatISTICS A: Basic Medical Care, treatment of minor ailments and Animal Bites	20	80	100	40	60	24
II	A: BASICS OF PATHOLOGY B: BASICS OF BLOOD BANKING C: BAICS OF MICROBIOLOGY A: Introduction to Public Health	20	80	100	40	60	24
III	A:HOSPITAL AWARENESS B:Communication Skills C:Patient Related Services D: Basics of central Sterilization  A: Environmental Sanitation	20	80	100	40	60	24

**PAPER -1**  
**ANATOMY & PHYSIOLOGY( 21 Periods )**

**A: Anatomy (Theory):-**

**1. Introduction:-**

**(a).** Common Anatomical terms & Anatomical Positions .Different parts of the human body

**(b)** Tissue with Function & Classification **(c)** Cell & Animal Cell

**(2.) Skeletal system:**

**(a)** Bones, joint, & Movement**(b)** Muscles

**(3) Genito- Urinary System:(a)** Male & Female

Reproductive Organic System **(b)** Urinary bladder, Kidney and Ureter **(C).** Uterus & Urethra

**(4)Respiratory System(a)** Lungs & Thoracic Cavity**(b)** Pleura **(c)** Surface marking of lungs

**(5)Gastro- Intestinal System :-****(a)** Mouth **(b)**Pharynx & Salivary gland and Tonsils  
**(c)**Oesophagus &stomach**(d)** Spleen & Pancreas **(e)** Gall Bladder & Liver **(f)** Surface making of Abdomen **(g)** Structure of Digestive Tract

**(6)Movement of the body(a)** Upper Limb –Bones, Important Vessels **(b)** Lower Limb – Bones Important Vessels

**(7)Nerves System(a)** C.S.F & Spinal Card **(b)** Nerves & Brain**(c)**SympatheticAnd Sympathetic **(d)** Cranial and Spinal Nerves

**(8)Cardio –Vascular System(a)** Arterial System **(b)** Lymphatic and Venous System **(c)** Heart **(d)** Surface Making, Important Blood Vessels & Muscles**(e)** Pericardium

**B: Physiology (Theory)( 21 Periods )**

1. Introduction to Human Physiology

2. **Digestive System(a)** Mastication deglutition**(b)**Function and Composition Saliva  
**(c)** Function of Stomach **(d)** Function and Composition of gastric juice  
**(e)** Function of Pancreatic Juice **(f)** Function of Bile

3. **Respiratory System(a)** Define-Respiratory Rate**(b)** Vital Capacity, Cyanosis  
**(c)**External & Internal Respiration **(d)** Transport of O<sub>2</sub> and CO<sub>2</sub> in the Blood **(e)** Function of Respiration its structure

4. **Blood(a)** Function of Blood **(b)** Composition of Blood **(c)** Anti-Coagulants**(e)**Description of Blood Cells**(e)** Blood Group of A B C O and Rh Factor**(f)** Function of Lymph **(g)**anaemia and its Type

5. **Cardio- Vascular System(a)** Define of Cardio output**(b)** Define the blood pressure, Electrocardiogram **(e)** Circulation (Systematic and Pulmonary) **(f)** Function of Heart **(g)** Function of Blood vessels **(h)** Cardio Cycle



6. **Excretory System**(a) Kidney (Function)(b) Formation of Urine (Normal and abnormal)(c) Composition of Urine
7. **ENDOCRINE GLAND**(a) Define- Name and hormones Secreted by than (b) Action of Hormones in our body
8. **Reproductive System**(a)Male female Genital System(b) Function of Ovary(c) Formation of Ova and Their action of ovarian Hormones(d) Function of Testis- Their action Testosterone(e)Mensuration Cycle and Fertilization (f)Progesterone and Oestrogen Hormones
9. **Skin**(a) Define the Skin (b) Function of Skin
10. **Formation**, Function &Composition of C.S.F
11. **Special Senses**-Smell, Taste, Touch, Hearing

### REFERENCE BOOKS:

1. Anatomy & Physiology for Paramedical students – Pinky Rajendra Wadiya
2. Anatomy & Physiology -Teena kumari
3. Anatomy & Physiology- Indu Khurana Arushi Khurana
4. Anatomy & Physiology- Gyton
5. Ross & Wilson Anatomy & Physiology in Health & Illness
6. BD Chaurasias Human Anatomy Vol-I

### C: BASICS OF BIO-CHEMISTRY (21 Periods )

Introduction to basics of Biochemistry including code of ethics for Medical Lab Technicians and Medical lab organization.

Reception, Registration and Bio-Chemical parameters investigated.

Glassware and Plastic ware used in Bio-Chemical Laboratory.

Glassware:

Types of glass and composition

Types of glassware used, their identification, application & uses.

Cleaning ,Drying, Maintenance and storage of glassware

Plastic ware : Brief outline Instrumental methods of Bio-chemical analysis.

Colorimetry: Visual and Photoelectric methods, Instrumentation, Principle & laws involved construction , operation , care and maintainance, applications.

**Spectrophotometry: Principle and theory, types , construction & applications**

**Basic lab operations like**

**Separation of solids from liquids**

**Centrifugation: Principle, Different types of centrifuges, care & maintenance, applications**

**Filtration using funnel**

**Weighing: Different types of balances used, care and maintenance.**

**Evaporation**

**Distillation**

**Refluxing**

**Drying different salts and desiccation**

**Water Chemicals and related substances**

**Purity of chemicals**

**Corrosives**

**Hygroscopic substances**

**Prevention , safety and FIRST AID in lab accidents.**

**Collection of Specimens.**

**Blood: Type of Specimens, collection, Precautions during collection, processing and preservation.**

**Urine: Types of Specimens, collection, precautions during collection, processing and preservation.**

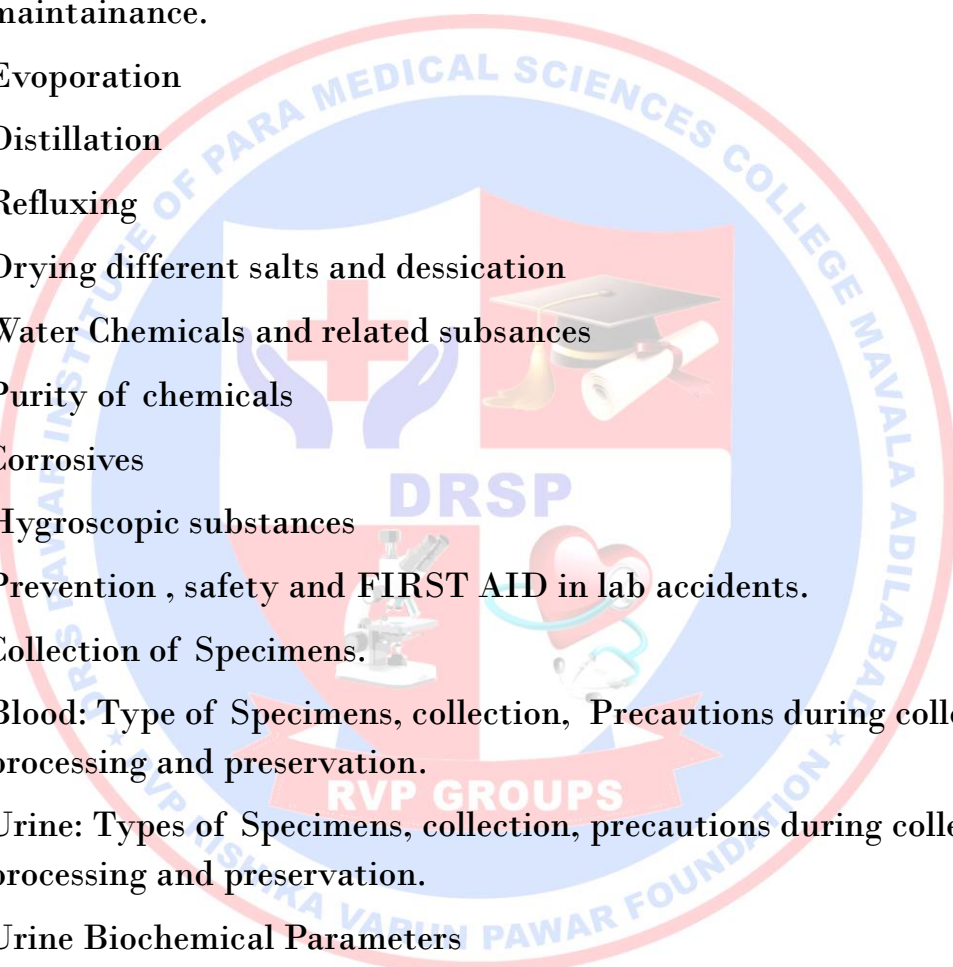
**Urine Biochemical Parameters**

**Units Of Measurements**

**Solutions: Types ,based on solute & solvent, Types based on method of expressing concentration , calculations.**

**Carbohydrates: Definition, Biological Importance, Acid Value, Iodine Value, Saponification Value.**

**Amino acids & Proteins: Definition, Biological Importance, Classification, Qualitative Tests.**



Diagnostic Tests: Blood Sugar, Glucose Tolerance Test, Blood Urea, Serum uric acid, Serum creatinine.

Vitamins & Minerals

Vitamins: Water Soluble Vitamins, Fat Soluble Vitamins, Sources, Daily Requirements, Deficiency Diseases.

Minerals: Sources, Daily Requirements, Deficiency Diseases.

### **REFERENCE BOOKS:**

Text Book on Bio-Chemistry for DMLT & Paramedical courses – Dr . I Clement

Biochemistry – Ullatyanarayana

Concise Text Book of Biochemistry -DM Vasudevan

Basics of Clinical Biochemistry & Instrumentation For Para medical Students – Poonam Bacchetti

A Text Book on Biochemistry for Paramedical Students -Dr. Kiran Dahiya

A Text Book of Medical Biochemistry – Dr. Rajagopal Ganapathy

Biochemistry & Clinical pathology 4<sup>th</sup> edition – VN Raje

Text Book of Biochemistry for Paramedical Students 2<sup>nd</sup> edition- Pramamoorthy

Biochemistry for Medical Laboratory Technology Students – Harbansandashuma Sachdeva

Text Book of Applied Biochemistry and Nutrition & Dietetics – Harbanslal

### **Part D : Basics Of Bio-Statistics ( 15 Periods )**

- 1.Introduction & Branches of Biostatistics
- 2.Types of variables, Measurements and measurement scales
- 3.Fundamentals of Biostatistics ( Sample, Population, Variable)
- 4.Importance of Biostatistics in paramedical sciences
- 5.Methods of statistical analysis
- 6.Basics statistical concepts and data interpretation are discussed in the subject ( Mean, Mode & Median)

7. The characteristics of Biostatistics & its importance
8. Measurement of Distribution ( Range, Variance & Standard Distribution)
9. Graphical methods to depict Data ( histograms, bar-plots, pie charts, line graphs)

**Reference Books:**

1. Biostatistics for medical & nursing students – C.S. Agrawal
2. A text Book of biostatistics – Vinod Kumar
3. Research methodology 7 Biostatistics – Vinod kumar
4. Biomedical Statistics – a beginners Guide – shakti kumar Yadav
5. Fundamentals of biostatistics – khan & Khanum

**Paper-I**

**BASIC MEDICAL CARE , TREATMENT OF MINOR AILMENTS  
AND ANIMAL BITES. ( 30-40 Periods )**

**1. Introduction**

Principles of medical care and treatment of minor ailments. Role and functions of the Health Workers in the health system. Resources available for treatment of minor ailments.

Coordination -understanding referral system; seeking guidance and learning opportunities.

**2. Home nursing and elementary medical care**

Preparing the sick unit/room at home. Hygiene of the patient - bath, elimination, feeding, activity, comfort measures, change of position, rest, recreation; observation of the patient-temperature, pulse, respiration, skin, elimination, general condition.

Medication and simple treatment.

Teaching family members to assist with care of the sick and to take home nursing responsibilities.

First aid kit for the home; equipment and supplies for home care; improvisations.

### 3. Treatment of minor ailments

(1) **Examination of the patient; methods of examination;** taking history of the patient; specific complaints and problems, detecting minor ailments and providing treatment and care; recognition of signs of danger, complications, signs of serious illness; appropriate action to be taken for serious emergencies and critical illness.

Health Workers role in accidents and diseases; management of accidents; management and care of the sick.

#### (2) **Conditions affecting the skin - signs, symptoms and treatment -**

- |                |                 |
|----------------|-----------------|
| i) Itching     | ix) Swelling    |
| ii) Rashes     | x) Pallor       |
| iii) Patches   | xi) Wounds      |
| iv) Scabies    | xii) Burns      |
| v) Lice        | xiii) Frostbite |
| vi) Ulcer      | xiv) Bites      |
| vii) Boils     | xv) Stings      |
| viii) Impetigo |                 |

#### (3) **Conditions affecting the ear and eye - signs symptoms and treatment-**

- |                               |                         |
|-------------------------------|-------------------------|
| i) Earache                    | viii) Trachoma          |
| ii) Discharging ear           | ix) Dry eyes            |
| iii) Foreign body in ear, eye | x) Watering eyes        |
| iv) Jaundiced eyes            | xi) Red eyes (inflamed) |
| v) Sore eyes                  |                         |
| vi) Blurred vision            |                         |
| vii) Eye injuries             |                         |

#### (4) **Conditions affecting the skeleton -signs, symptoms and treatment-**

- |                        |                  |
|------------------------|------------------|
| i) Joint pains         | iv) Dislocations |
| ii) Swelling of joints | v) Fractures     |
| iii) Sprains           |                  |

#### (5) **Conditions affecting the respiratory system - signs, symptoms and treatment-**

- |                              |                            |
|------------------------------|----------------------------|
| i) Nose bleeding             | Vii) Prolonged cough with, |
| ii) Foreign body in the nose | blood in sputum            |
| iii) Sore-throat             | Viii). Chest-injuries      |

- iv) Bronchopneumonia in children
- v) Common cold
- vi) Cough with fever
- ix) Chest pain
- x) Shortness of breath
- xi) Asphyxia
- xii) Tonsillitis

**(6) Conditions affecting the digestive system -signs, symptoms and treatment-**

- i) Diarrhea - mild
  - severe with blood or mucus
- ii) Indigestion
- iii) Stomach-ache
- iv) Jaundice
- v) Worms-hookworm, roundworm, thread-worm
- vi) Abdominal pain
- vii) Abdominal distension
- viii) Abdominal injuries
- ix) Constipation
- x) Blood in stools
- xi) Sores in the mouth
- xii) Gum bleeding

**(7) Conditions affecting the urinary system-signs, symptoms and treatment-**

- i) Micturition :- -frequency, - painful , -retention of urine, - with blood
- ii) Renal colic
- iii) Enuresis
- iv) Incontinence

**(8) Conditions affecting the neuromuscular system -signs, symptoms and treatment**

- i) Temperature regulation
- ii) Headache – mild, - moderate, -occasional, - high, - persistent, - severe
- iii) Fever
- iv) Backache
- v) Heat stroke
- vi) Heat exhaustion
- vii) Convulsions
- viii) Paralysis
- ix) Unconsciousness
- x) Head injuries

**(9) Conditions affecting the reproductive system-signs, symptoms and treatment -**

- i) Sores on the genital area
- ii) Urethra! discharge
- iii) Vaginal discharge
- iv) Abnormal menstruation
- v) Painful menstruation
- vi) Prolapse
- vii) Breast abscess
- viii) Breast lump

**4. Basic medical care**

- Ailments in children; basic medical and nursing care in common disorders of
- cardiovascular system

- respiratory system
- alimentary system
- urinary system
- skeletal system
- neuromuscular system.

## 5. Pharmacology

Introduction to study of pharmacology; sources of drugs, drug legislation; preparation of drugs -solutions and suspensions, capsules, tablets, pills, powders, liniments, ointments, pastes, plasters, poultices, suppositories, dangers of misuse and indiscriminate use of drugs.

Weights and measures; metric system, converting from one system to another; calculation of dosages; household measures in home nursing, problems of measuring accurately teaspoon, cup, glass.

Abbreviations in common use; prescription and orders for medications.

Action of drugs -local action, systemic action; factors that influence action; route of administration.

Care of drugs; policies and regulations regarding administration of medicines; role of the Health Worker.

Classification and action of groups of drugs:

- |                     |                  |
|---------------------|------------------|
| i) Analgesics       | ix) Disinfectant |
| ii) Anesthetics     | x) Diuretics     |
| iii) Anticoagulants | xi) Haematinics  |
| iv) Antiemetics     | xii) Hormones    |
| v) Antihistamines   | xiii) Laxatives  |
| vi) Antipyretics    | xiv) Sedatives   |
| vii) Antiseptics    | xv) Stimulants   |
| viii) Depressants   | xvi) Vitamins    |

### Animal Bites

Dog bites typically cause a crushing-type wound because of their rounded teeth and strong jaws. An adult dog can exert 200 pounds per square inch (psi) of pressure, with some large dogs able to exert 450 psi. Such extreme pressure may damage deeper structures such as bones, vessels, tendons, muscle, and nerves. Wounds to the left arm and hip inflicted during a dog attack.

The sharp pointed teeth of cats usually cause puncture wounds and lacerations that may inoculate bacteria into deep tissues. Infections caused by cat bites generally develop faster than those of dogs.

Monkey bites have a notorious reputation based largely on anecdotal reports. Several cases of unprovoked attacks on young children and infants by domesticated ferrets have been documented.

The bites of foxes, raccoons, skunks, bats, dogs, and cats have been clearly linked to rabies exposure. Bites from large herbivores generally have a significant crush element because of the force involved.

Bites of the hand generally have a high risk for infection because of the relatively poor blood supply of many structures in the hand and anatomic considerations that make adequate cleansing of the wound difficult. In general, the better the vascular supply and the easier the wound is to clean (ie, laceration vs puncture), the lower the risk of infection.

A major concern in all bite wounds is subsequent infection. Infections can be caused by nearly any group of pathogens (bacteria, viruses, rickettsia, spirochetes, fungi). At least 64 species of bacteria are found in the canine mouth, causing nearly all infections to be mixed. Common bacteria involved in bite wound infections include the following:

**Dog Bites :** Staphylococcus species, Sterptococcus species, Eikenella species , Pasteurella, Proteus species, Klebsiella species, Haemophilus species, Enterobacter species, DF-2 or Capnocytophagacanimorsus, Bacteroides species, Moraxella species, Corynebacterium species, Neisseria species, Fusobacterium species, Prevotella species, Porphyromonas species.

**Cat Bites:**

Pasteurella species, Actinomyces species, Propionibacterium species, Bacteroides species, Fusobacterium species, Clostridium species, Wolinella species, Peptostreptococcus species, Staphylococcus species, Streptococcus species

Actinobacillus lignieresii, Actinobacillus suis, Pasteurella multocida, Pasteurella caballi, Staphylococcus hyicus subsphycus

**Herbivore Bites:**



Swine bites: *Pasteurella aerogenes*, *Pasteurella multocida*, *Bacteroides* species, *Proteus* species, *Actinobacillus suis*, *Streptococcus* species, *Flavobacterium* species, *Mycoplasma* species.

Rodent Bites : Rat-bite fever : *Streptobacillus moniliformis*, *Spirillum minus*

Primates: *Bacteroides* species, *Fusobacterium* species, *Eikenellacorrodens*, *Streptococcus* species, *Enterococcus* species, *Staphylococcus* species, *Enterobacteriaceae*, Simian herpes virus

Large Reptiles ( Crocodiles, Alligators )

*Aeromonas hydrophila*, *Pseudomonas pseudomallei*, *Pseudomonas aeruginosa*, *Proteus* species

#### **Reference Books:**

1. Principles of Medical Education – Daljith Singh
2. Multipurpose Health Assistant – Male -Mrs . Jyothi Kumari
3. Emergency Medicine and Critical Care - Vidyasagar

#### **First Aid and Emergency Care**

Life saving measures, management of emergency situation, General rules for first aid, observations, examinations, tests, temperature, pulse, respirations, blood pressure, weight and height, history taking, physical examination, urine analysis, collection of specimens, X-ray and special tests, dressing and bandages.

Mental Health: - Introduction to psychology, mental hygiene and health, self understanding and growth, mental hygiene and health in various stages of life. Mental illness: normal and abnormal behavior, education

#### **1.Promoting safety consciousness.**

Safety measures in the school, playgrounds, streets, institutions.

Safety on the job - farm and factory.

Prevention of accidents - common sense measures and observation of few simple rules.

#### **2.Injuries to bones, joints**

First aid measures for injuries to upper extremities-First aid measures for injuries to lower extremities.

First aid measures for injuries to skull rib injuries, injury to pelvis.

First aid measures for spinal injuries, multiple fractures, crush injuries.

### **3. First aid in wounds and haemorrhage**

Wounds - types, principles of wound care, immediate care.

Haemorrhage- types, control of bleeding, pressure points, bleeding from special regions and cavities-, nose, stomach, lungs, kidney, bowel, gums, ear. internal bleeding.

### **4. First aid in poisons bites and stings foreign bodies**

Swallowed poisons Snake bite Foreign bodies in

Inhaled poisons Dog bite - eye

Injected poisons Rabies - ear, nose, throat Insect bites - stomach and stings.

### **5. First aid in unconsciousness**

Loss of consciousness, Heat stroke, Fainting , Stupor ,Coma ,Convulsions, Hysteria

Asphyxia - drowning, strangulation, choking;- causes, types, signs and symptoms; - artificial respiration.

### **6. Thermal, electrical and chemical injuries**

Burns and scalds -first aid treatment for critical burns; burns caused by strong acids, alkalis; moderate burns; minor burns and scalds.

Electric shock - first aid measures.

### **7. Emergency care/disasters and first aid**

Types of disasters; Health Workers' responsibilities; aspects of disaster relief work.

Principles of preserving life and health in emergencies. To community (or safety of water supply, food, safe disposal of waste, health protection measures including immunization, management of emergency childbirth.

### **8. First aid procedures, supplies and equipment Application of bandages, slings, dressings, splints.**

Transport of casually, stretchers, lifting -and carrying injured persons, blanket lift and other improvisations.

First aid supplies, first aid kit.

Drugs used in preventive medicine

In addition to a healthy lifestyle, preventive medications can help people avoid many illnesses and conditions. A consumer-directed health (CDH) plan that includes preventive medications can help support the goal of ongoing good health.

This list provides examples of your plan's preventive medications. The medications are categorized based on the medical conditions that they are used to prevent. This is not an all-inclusive list; only examples of medicines in each category are listed. Coverage prior to the deductible being met may not be provided for every dosage form of a listed medication. Please check with your plan administrator if you have questions. This list is periodically reviewed and updated to ensure that the drugs listed meet the criteria for inclusion.

Medications on this list that are not covered under the plan are not eligible for the preventive medication program. This list includes medications sometimes used for prevention and sometimes for treatment.

#### Preventive Medications List

##### ANEMIA IN CHILDREN

FERROUS SULFATE LIQUID DROPS FOR INFANTS (SUCH AS FE'R-IN-SOL)

##### ASTHMA

SINGULAIR MONTELUKAST ACCOLATE ZAFIRLUKAST ZYFLO CR ZILEUTON

##### BONE DISEASE AND FRACTURES

FOSAMAX, FOSAMAX PLUS D ALENDRONATE FORTICAL, MIACALCIN  
CALCITONIN XGEVA DENOSUMAB BONIVA IBANDRONATE EVISTA  
RALOXIFENE ACTONEL RISEDRONATE RECLAST ZOLEDRONIC ACID BREAST  
CANCER RECURRENCE

TAMOXIFEN, ARIMIDEX, ANASTROZOLE, AROMASIN, EXEMESTANE, FEMORA  
LETROZOLE

##### CANCER TREATMENT, SIDE EFFECTS FROM

ARANESP DARBEPOETIN ALFA EPOGEN, PROCIT EPOETIN ALFA NEUPOGEN  
FILGRASTIM DEPO-PROVERA MEDROXYPROGESTERONE MESNEX MESNA  
NEULASTA PEGFILGRASTIM LEUKINE SARGRAMOSTIM

##### CAVITIES

PROVIDENT

SODIUM FLUORIDE COLONOSCOPY PREPARATION

COLYTE, GOLYTELY, HALFLYTELY, NULYTELY, TRILYTE, MOVIPREP  
*POLYETHYLENE GLYCOL VISICOL, OSMOPREP, SUPREP SODIUM PHOSPHATE  
SALTS*

ESTROGEN REPLACEMENT AND OTHER HORMONES

PREMARIN *CONJUGATED ESTROGEN TABLETS* PREMPRO, PREMPHASE  
*CONJUGATED ESTROGEN/ MEDROXYPROGESTERONE* ESTRACE *ESTRADIOL  
TABLETS* CLIMARA *ESTRADIOL TRANSDERMAL*

ESTRADERM *ESTRADIOL TRANSDERMAL* VIVELLE DOT *ESTRADIOL  
TRANSDERMAL* DIVIGEL *ESTRADIOL, GEL* EVAMIST *ESTRADIOL,  
TRANSDERMAL SPRAY* COMBIPATCH *ESTRADIOL/NORETHINDRONE,  
TRANSDERMAL* MAKENA *HYDROXYPROGESTERONE CAPROATE* PROVERA  
*MEDROXYPROGESTERONE* CRINONE, PROMETRIUM *PROGESTERONE*  
CENESTIN *SYNTHETIC CONJUGATED ESTROGENS, A* ENJUVIA *SYNTHETIC  
CONJUGATED ESTROGENS, B*

GOUT

ZYLOPRIM, ALLOPURINOL, COLCRYS, COLCHICINE GUM DISEASE.

ARESTIN, MINOCYCLINE

HEART DISEASE AND STROKE

BLOOD THINNER MEDICINES:

ASPIRIN, 81 MG OR 325 MG HEPARIN

AGGRENOX: - ASA/DIPYRIDAMOLE

PLAVIX: - CLOPIDOGREL

FRAGMIN; - DALTEPARIN

LOVENOX: - ENOXAPARIN

ARIXTRA: -

FONDAPARINUX **EFFIENT:**

PRASUGREL XARELTO; -

RIVAROXABAN

BRILINTA: - TICAGRELOR, COUMADIN, JANTOVEN

WARFARIN

CHOLESTEROL LOWERING MEDICINES

VIRUS

AMANTADINE, ZOVIRAX, ACYCLOVIR, FAMVIR, FAMCICLOVIR, FOSCAVIR,  
FOSCARNET

CYTOVENE, GANCICLOVIR, TAMIFLU, OSELTAMIVIR, VALTREX, VALACYCLOVIR  
VALCYTE, VALGANCICLOVIR, RELENZA, ZANAMIVIR

KIDNEY DISEASE, HIGH PHOSPHATE LEVELS

PHOSLO, PHOSLYRA *CALCIUM ACETATE* FOSRENOL *LANTHANUM* RENVELA,  
RENAGEL *SEVELAMER*

NAUSEA AND DIZZINESS

PROCHLORPERAZINE

PROMETHAZINE

EMEND

APREPITANT

ANZEMET

DOLASETRON

MARINOL

DRONABINOL

SANCUSO

GRANISETRON

ANTIVERT

MECLIZINE

OBESITY: - DIETHYLPROPION

*XENICAL*: - ORLISTAT

*BONTRIL* :- PHENDIMETRAZINE, adipex-p, ionamin, PHENTERMINE

PREGNANCY BIRTH CONTROL MEDICINES TAKEN BY MOUTH BIRTH CONTROL DEVICES: DIAPHRAGMS, SKIN PATCH SYSTEMS, INJECTABLE BIRTH CONTROL, INTRAUTERINE SYSTEMS, AND IMPLANTS

SMOKING-CESSATION THERAPY

ZYBAN

BUPROPION

*NICOTROL*, NICOTINE PRODUCTS, *CHANTIX*, *VARENICLINE* ULCER DISEASE

MISCELLANEOUS AGENTS:

PYLERA

BISMUTH/METRONIDAZOLE/

TETRACYCLINE

CARAFATE

SUCRALFATE

PROTON PUMP INHIBITORS :

NEXIUM, ESOMEPRAZOLE, PREVACID, LANSOPRAZOLE, PROTONIX,  
PANTOPRAZOLE ACIPHEX, RABEPRAZOLE VACCINES

VACCINES:

DIPHThERIA, PERTUSSIS, TETANUS, HAEMOPHILUS INFLUENZAE B, HEPATITIS  
A AND B, HUMAN PAPILLOMAVIRUS, INFLUENZA, MEASLES, MENINGOCOCCAL,  
MUMPS, PNEUMOCOCCAL, POLIOVIRUS, ROTAVIRUS, RUBELLA, AND VARICELLA

VITAMINS OR MINERALS, LOW LEVELS OF

CALCIUM

FOLIC ACID, 0.4 TO 0.8 MG IRON

MAGNESIUM MULTIVITAMIN PRODUCTS POTASSIUM BICARBONATE/CITRIC ACID

POTASSIUM CHLORIDE PRESCRIPTION PRENATAL VITAMINS VITAMINS: A, B, Bi,  
B6, B12, D, K ZINC

## **BIO-MEDICAL WASTE MANAGEMENT**

At present with advancement of medical science most of the hospitals/ nursing homes are now equipped with latest instruments for diagnosis and treatment of various diseases.

One of the most important aspect associated with hospitals is the safe management of the wastes; generated from these establishments, which contains human anatomical wastes blood, body fluid, disposable syringe, used bandages, surgical gloves, Blood bags intravenous tubes etc.

The Bio-medical waste generated from various sources has become a problem and much attention is being given worldwide to find out solution of this problem.

The main concern lies with the hospital waste generated from large hospitals/nursing homes as it may pose deleterious effects due to its hazardous nature. Bio-medical wastes, if not handled in a proper way, is a potent source of diseases, like AIDS, Tuberculosis, Hepatitis and other bacterial diseases causing serious threats to human health. Owing to the discussed potential threats this waste needs prime attention for its safe and proper disposal.

### **STANDARDS OF MICRO WAVING**

1. Microwave treatment shall not be used for cytotoxic, hazardous or radioactive wastes, contaminated animal carcasses, body parts and large metal items.
2. The microwave system shall comply with the efficacy test/ routine tests and a performance guarantee may be provided by the supplier before operation of the unit.
3. The microwave should completely and consistently kill the bacteria and other pathogenic organisms that is ensured by approved biological indicator at the maximum design capacity of each microwave unit. Biological indicators for microwave shall be Bacillus Subtitles spores strips with at least  $1 \times 10^4$  spores per millilitre.

## STANDARDS FOR DEEP BURIAL

- A pit or trench should be dug about 2 meters deep. It should be half filled with waste, and then covered with lime within 50 cm of the surface, before filling the rest of the pit with soil.
- It must be ensured that animals do not have any access to burial sites. Covers of galvanised iron/wire meshes may be used.
- On each occasion, when wastes are added to the pit, a layer of 10 cm of soil shall be added to cover the wastes.
- Burial must be performed under close and dedicated supervision.
  - The deep burial site should be relatively impermeable and no shallow well should be close to the site.
  - The pits should be distant from habitation, and sited so as to ensure that no contamination occurs of any surface water or ground water. The area should not be prone to flooding or erosion.
  - The location of the deep burial site will be authorised by the prescribed authority.
- The institution shall maintain a record of all pits for deep burial.

A time limit has been defined by Govt. of India for installation of treatment facilities for Biomedical waste

### Mental Diseases

#### Introduction

Normal and abnormal behaviour.

Causes of abnormal behaviour - intrinsic factors and extrinsic factors; predisposing and precipitating factors.

Observation of significant behavioural changes - where - clinics, health centres, home visits, schools; how - observation, listening, talking to people, other methods.

#### Resources and facilities for prevention and early detection of mental illness

- Family health care services;
- Maternal and child health services;
  - School health services;
- Primary Health Centre facilities;
- Community;

- Health Workers as a resource.

**Basic skills - human relations Skills;** skills in forming effective interpersonal relationship, communication skills-verbal and non-verbal.

Responsibilities of Health Worker, individual, family and community, for prevention, early detection, care and acceptance.

### **Prevention of mental illness**

Recognizing problems of adjustment in various life stages:

- childhood
- adolescence
- adulthood
- old age
- stress, strains, and crisis - situation in each stage.

Understanding adjustment reactions - constructive behaviour, psychosomatic behaviour, emotional nervous behaviour, destructive behaviour.

Caring for people with problems

Childhood problems -e.g. fears, nightmares, learning difficulties, destructive ways. Problems of adolescence -depression, aggressive ways, individual and group delinquency. .

Problems of adults - family life adjustment problems, marital adjustment problems, occupational maladjustments.

Problems of old age - problems of economic insecurity; retirement, dependence, ageing and diminished vigour.

Observation of individuals with deviant behaviour patterns - withdrawal patterns

- aggressive patterns- patterns indicating anxieties, depression - projective patterns.

### **Early detection of mental disorders**

Recognizing signs and symptoms related to:

- disturbances of thinking, delusions, fantasies, incoherent speech, irrelevant talk, phobias, obsessions;
- disturbances of consciousness; confusion, stupor, delirium, coma and sleep disturbances - insomnia;
- disturbances of orientation, disorientation in relation to time, place and person;
- disturbances of memory, amnesia;
- disturbances of emotions, hallucinations, illusions, depression. anxiety, hostility, mood swings;



- disturbances of other aspects of behaviour - over-activity, hypo activity, compulsive activity;
- disturbances of personality - problems related to family life, life pattern, work, personal and social relations;
- disturbances of intelligence - retarded behaviour in children.

### **Mental diseases**

Behaviour indicating - Psychosomatic diseases, drug dependence, drug addiction, neurotic diseases, psychotic diseases, organic brain diseases, mental retardation, personality-disorders.

Basic therapies.

Principles of after-care and supervision,

Psychiatric emergencies, principles of first aid and emergency care, preventive aspect of psychiatric emergencies, Legal aspects.

### **Occupational diseases**

An **occupational disease** is any chronic ailment that occurs as a result of work or occupational activity. It is an aspect of occupational safety and health. An occupational disease is typically identified when it is shown that it is more prevalent in a given body of workers than in the general population, or in other worker populations. The first such disease to be recognized, squelors of the scrotum was identified in chimney boys by Sir Percival Potts in 1775. Occupational hazards that are of a traumatic nature (such as falls by roofers) are not considered to be occupational diseases.

Under the law of workers' compensation in many jurisdictions, there is a presumption that specific disease are caused by the worker being in the work environment and the burden is on the employer or insurer to show that the disease came about from another cause. Diseases compensated by national workers compensation authorities are often termed occupational diseases. However many countries do not offer compensations for certain diseases like musculoskeletal disorders caused by work. Therefore the term work-related diseases is utilized to describe diseases of occupational origin. This term however would then include both compensable and non-compensable diseases that have occupational origins

Some well-known occupational diseases include:

### **Lung diseases**

*Main article: Occupational lung disease*

Occupational lung diseases include asbestosis among asbestos miners and those who work with friable asbestos insulation, as well as black lung (coal worker's) among miners, silicosis among miners and quarrying and tunnel operators and by sinuses among workers in parts of the cotton textile industry.

Occupational asthma has a vast number of occupations at risk.

Bad indoor air quality may predispose for diseases in the lungs as well as in other parts of the body.

### **Skin diseases**

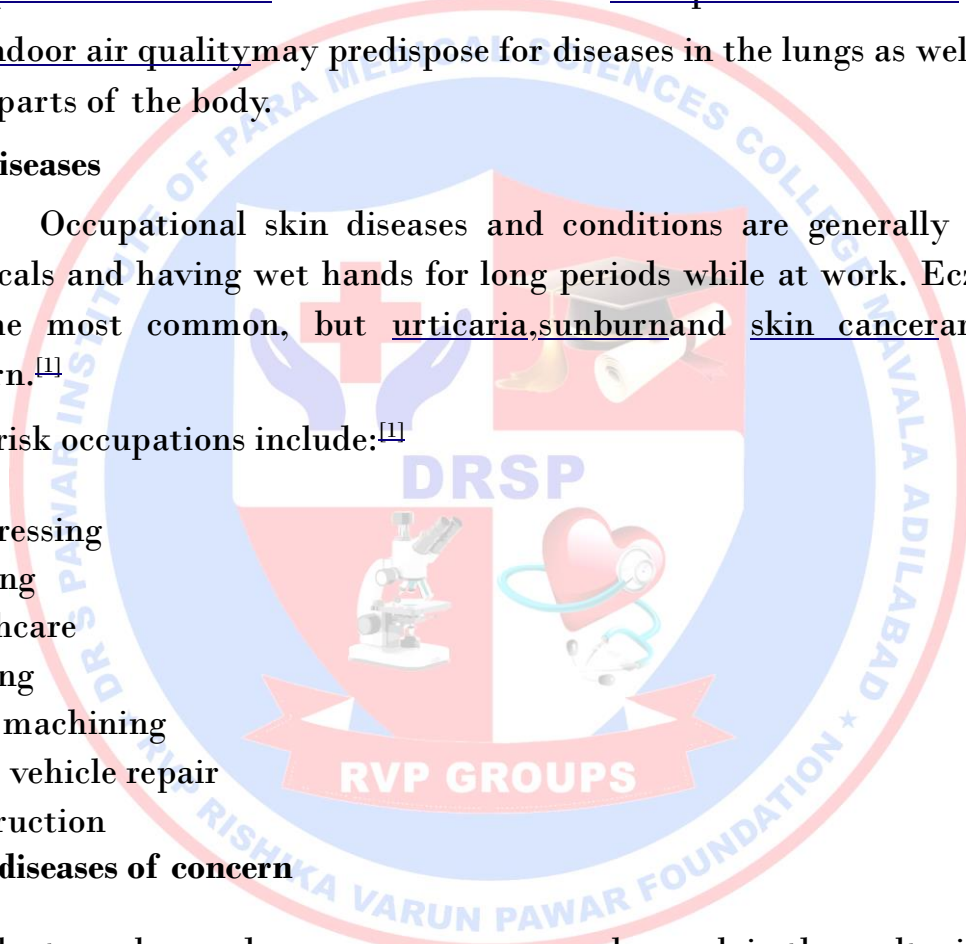
Occupational skin diseases and conditions are generally caused by chemicals and having wet hands for long periods while at work. Eczema is by far the most common, but urticaria, sunburn and skin cancer are also of concern.<sup>[1]</sup>

High-risk occupations include:<sup>[1]</sup>

- Hairdressing
- Catering
- Healthcare
- Printing
- Metal machining
- Motor vehicle repair
- Construction

### **Other diseases of concern**

- Carpal tunnel syndrome among persons who work in the poultry industry and information technology.
- Computer vision syndrome among persons using information technology for hours.
- Lead poisoning affecting workers in many industries that processed or employed lead or lead compounds



# Communicable Disease

## Introduction to communicable diseases

Terminology; prevalence of communicable diseases. Modes of disease transmission; general measures for prevention and control of communicable diseases - controlling source of infection - blocking channels of transmission - protection of susceptible. Understanding role of Health Worker, family, community, individual and public health authorities In relation to specific measures - notification, isolation and quarantine, disinfection and education of public; vector control,

## Immunity and immunization

Purpose, types, effects.

National immunization schedule for prevention of major communicable diseases BCG, DPT, Polio, Measles and Typhoid vaccines.

Immunization reactions -precautions to be taken; use of safe techniques and sterile equipment; testing for sensitivity reactions; emergency treatment for anaphylactic shock; methods of immunization and related technique.

## Care and treatment of patient with infection

Recognition of signs and symptom? - common signs and symptoms of infection -fever, pulse changes, urinary signs, respiratory changes, gastrointestim I signssnd symptoms. Principles of care and treatment - rest, diet, fluids, hygienic care; medications and treatment; observation of patients; measures for prevention of spread of infections. Home care of a sick patient - individual articles tor hygienic care, food and fluids; hand washing facilities; protection of clothes, safe disposal of excreta; safe disposal of contaminated material, e.g. garbage; safe, handling of equipment and supplies.

## Disinfection and sterilization

Disinfection, disinfectants, sterilization. Antiseptics, deodorants, detergents. Natural agents-physical agents, chemical agents. Effective disinfection by liquid chemical agents - halogens, coal tar disinfectants, detergents, oxidizing agents, heavy metals, miscellaneous agents; techniques; precautions. Effective disinfection by solid chemical agents-bleaching powder, lime, other disinfectants; techniques; precautions.

Effective disinfection by gaseous agents - formalin. Disinfection of water, excreta. "\* Health teaching aspects.

### **Specific communicable .diseases and infections .**

- Prevention-and control, incubation: - period, care in specific communicable diseases and infections.

- 1) Malaria
- 2) Filariasis
- 3) Dengue
- 4) Kalaazar
- 5) Tuberculosis
- 6) Leprosy 7) Typhoid
- 8) Smallpox
- 9) Chickenpox
- 10) Measles
- 11) Mumps
- 12) Diphtheria
- 13) Pertussis
- 14) Cholera
- 15) Infectious hepatitis
- 16) Dysenteries
- 17) Acute gastro-enteritis
- 18) Amoebiasis
- 19) Worm infestation
- 20) Conjunctivitis Threadworm
- 21) Other gastro-intestinal
- 22) Tetanus
- 23) Influenza
- 24) Encephalitis
- 25) Rabies 26) Plague
- 27) Trachoma Hookworm, Roundworm

### **NUTRITION**

Relation of nutrition to health; relation of other factors. importance to nutritional status and health, e.g. infections. Classification and functions of foods -body building, energy yielding, and protective foods.

Nutrients - carbohydrates, proteins, fats, vitamins, mineral functions, sources and daily requirements of each; color requirements; water and cellulose.



## **Nutritive value of foodstuffs**

Cereals Pulses Fats & oils

Vegetables Milk & milk products Sugar

Fruits, Eggs, Meat & fish Condiments

Spices

Beverages

Enriching subsistence diets with locally available foodstuffs.

## **The balanced diet**

Definition; factors to be considered in planning meals; improvement of diets; selection of foods; cultural factors; nutritional requirement for special groups; vulnerable groups; improving maternal nutrition and child nutrition. Modified diets-liquid, bland, soft, full.

## **Preparation and preservation of foods**

General principles of cooking; methods of cooking; effects cooking on nutrients and common foodstuffs. Preservation of foods-household methods Food hygiene-simple household measures. **Cultural factors in nutrition** Foods fads, food habits.

Food adulteration practices injurious to health.

Nutrition education - principles of imparting nutrition knowledge Dietary survey.

## **Malnutrition**

Malnutrition, under nutrition; causes; inter-relationship of factors leading to malnutrition, e.g. infections, worm infestations. Deficiency diseases in the country including vitamin deficiency protein-energy malnutrition, goitre.

## **Practicals**

Treatment of Minor Ailments at affiliated hospitals.

Home Nursing.

First Aid Bandages, Signs, bleedings point and areas hemorrhages.

Training in Nutrition, Nutritional Survey, and balanced diet.

Visit of T.B. hospital /sanatorium.

## ***Reference Books:***

1. Emergency Medicine and Critical Care- V Acharya
2. LC Gupta's Manual of FIRST AID

3. Principles of Medical Education 5<sup>th</sup> edition Daljith Singh
4. Medical Symptoms Visual Guide 2<sup>nd</sup> edition
5. First AID and Emergency Care – Kubade
6. Hospital and Patient care management -Dr . Akshay Ch . Deka
7. A short book on Communicable diseases – Dr . Kundan Prakash
8. Public health approaches to non- communicable diseases – JS Thakur
9. Control of Communicable Diseases Manual – Heymann, MD
10. Tropical Infectious Diseases – David H . Walker
11. Case of Infectious Diseases – F. D . Dastur
12. Gant’s Manual of Clinical Problems in Infectious Disease – 6<sup>th</sup> edition  
Johnathon P. moorman



**Paper-II**  
**Basics of Pathology( 12 Periods )**

**Introduction to Pathology in brief**

1. Urine – Analysis – a. Physical Examination – specific gravity PH, reaction, Colour.  
b. Chemical Examination – Sugar Albumin, Bile salts, Bile Pigments etc.  
c. Microscopic, d. Sediment for RBC, WBC, Epithelial cells, Casts, Crystals, Parasites.

Preparation of Reagents, procedure and principle of tests.

2. Sputum Analysis – Physical Examination, Preparation and staining smear for Microscopic Examination.
3. Semen Analysis – Physical Examination Microscopy – counting, Motility, Staining. Morphology. Abnormal and normal forms.
4. Body Fluids – Differential count of Peritoneal, pericardial, pleural fluids & CSF, charging chamber, Identifying and counting the cells.

**Reference Books:**

1. Text Book on Pathology – Dr . I Clement
2. Pathology for paramedical students & health sciences -Ramnik sood
3. Text Book of Pathology & genetics – Rimpi Bansal
4. Histopathology – Aruna Singh
5. Text Book of pathology for allied health sciences – Ramadas Nayak

## **Part B : Basic Of Blood Banking ( 18 Periods )**

1. History of blood banking , To study evolution of different blood groups.
2. Blood grouping, typing and complement system , To study basics of different blood groups& complement system
3. Identification of antibodies and antibody screening , To identify various antibodies in blood group systems & methods of screening antibodies
4. Various blood components and their functions , To have knowledge of blood components and their functions and uses
5. Coagulation and hemostasis , To know basics of coagulation pathways and hemostasis
6. Immune hemolytic anaemias and Hemolytic disease of newborn , To know types of hemolytic anaemias along with details of hemolytic disease of newborn
7. Cross matching & compatibility testing , To know major & minor cross matching and compatibility testing
8. Donor selection , To know criteria of selection of donor
9. Pre-transfusion serologic testing , To know different tests used for pre transfusion serologic testing
10. Donor recruitment, phlebotomy and Donor reactions , To know how to perform phlebotomy and different donor reactions
11. Adverse blood transfusion reactions , To have complete knowledge of adverse blood transfusion reactions
12. Investigations of transfusion reactions , To know how to investigate a blood transfusion reaction
13. Apheresis , To know what is apheresis & its importance
14. Preparation and storage of blood components and their uses , To know procedure of preparation of blood components & their uses
15. Record keeping, quality control and blood bank Inspections , To know importance of record keeping & preparation for inspection of blood banks according to the protocol
16. Guidelines for safe blood transfusion , To know the guidelines for safe blood transfusions
17. Safety procedures in blood banking , To know the safety procedures in blood banking to avoid serious hazards
18. Safe storage and transportation of blood and its components , To know how to store components, procedure for transportation of blood components
19. Safe disposal of lab waste in blood bank , To know in detail how to dispose lab waste in blood bank and its importance
20. Medicolegal aspects of blood banking , To know the importance of blood banking from medico-legal point of view

21. Administration of blood bank , To know different ways of administration in a blood bank ,
22. Management of donor reactions in Blood donation camp , To enumerate steps in management of reactions in donor at camp site
23. Component preparation , To observe various steps in procedure for component preparation & enumerate them
24. Investigating a transfusion reaction , To enumerate various steps in investigating a transfusion ,reaction
25. Conduction of blood donation camp , To perform MOCK conduction of blood donation camp & later attend a blood donation camp
26. Documentation in blood bank , To write down all the steps point wise on various documents required in blood bank and updation of these.

### Reference Books:

1. Essentials of blood banking – SR Mehdi
2. Standard operating procedures and regulatory guidelines blood banking- Singal
3. Blood banking and transfusion practices – Paula R. Howard
4. Blood banking and transfusion medicine basic principles & Practice – Hillyer
5. Essentials of blood banking and transfusion medicine – Ganga S Pilli

### Part C : Basics Of Microbiology ( 15Periods )

#### Basics of Microbiology

1. Introduction to Microbiology in brief : Definition, History
2. Microscopy
  - a) Principle working and maintenance of compound Microscope.
  - b) Principle of Fluorescent microscope, Electron Microscope, Dark Ground Microscope.

History : Types of Microscope: (a) Light Microscope, (b) DGI, (c) Fluorescent, (d) Phase contrast. (e) Electron Microscope: a). Transmission, b) Scanning, Principles of operational mechanisms of various types of Microscopes.

3. Sterilization and disinfection - classification and Methods of sterilization.

Sterilization: Definition, types and principles of sterilization methods: (a) Heat (dry heat, moist heat with special reference to autoclave, (b) Radiation, (c)

Filtration, efficiency testing to various sterilizers.

Antiseptics and Disinfectants: Definition, types and properties, mode of action, uses of various disinfectants, precautions while using the disinfectants, qualities



of a good disinfectants, testing efficiency of various disinfectants.1) Principle and Methods of sterilization by heat

a) By Dry Heat, flaming, Red Heat, Hot air oven, incineration.

b) By Moist Heat-pasteurization, Inspissation, tyndalisation, autoclave.

2) Filtration Methods

3) Ionising Radiation - Disinfection, Mode of action and uses of important chemical disinfections - Phenol and Phenolic compounds, alcohols, halogens, dyes and acids and alkalies.

4) Gaseous Methods of sterilization.

IV. Cleaning, drying & Sterilization of Glassware disposal of contaminated material i.e. clinical infective material inoculated culture media. Handling and Disposal of Biomedical waste.

V. Biomedical waste management in a Microbiology Laboratory: types of the waste generated, segregation, treatment, disposal.

VI. Morphology and classification of Bacteria Sp. of cell, capsule, flagella, spore, Anaerobic Methods of cultivation of Bacteria.

#### **Reference Books :**

1. Text Book Of Microbiology for paramedical students – Auju Dhir
2. Text Book of Microbiology for DMLT Students & Paramedical students – Dr. I Clement
3. Text Book of Microbiology – Dr. Arora

#### **PAPER –II Introduction to Public Health ( 30 Periods )**

**Concept of public health, health problems and responsibilities of health workers.**

Ethics and behavior of health workers. The health team. Public health services Principles of organizing care in the home, health agencies, clinics, schools, hospitals. Principles of organizing care according to degree of 'wellness' or 'illness'. Principles of organizing care according to needs of the patient seriously ill, chronically ill, moderately ill, and terminally ill. Principles of organizing care according to patient groups: age groups, -children and adolescents adults and the elderly-. Health or medical problems, e.g. patient with fever unconsciousness. patients for surgery. Public health laboratories. Concept of public health, health problems and responsibilities of health workers. Ethics and behavior of health workers.

The health team.

### **Family health care**

The family as an integral unit of the health services.

The family as the focus of Health Workers' attention' in health and family matters. Family health as it relates to

- income
- illiteracy of members
- Cultural patterns of society.

### **School health services**

Objectives of school health services.

Components of a comprehensive school health programme — health appraisal of school children; prevention of communicable diseases; early detection and attention to defects; healthful school environment; nutritional services — food supplements; health education including nutrition education and population education; school health records; first aid. And emergency care; treatment of minor ailments.

Role of Health Worker in school health programme as co-ordinator, educator, organizer, counsellor, interpreter, serving as a liaison between school, home and community.

### **PUBLIC HEALTH ADMINISTRATION**

Organization of National Health Care Services. System of National Health

Care Services SubCenter:

- a) Primary Health Care
- b) Community Health Care
- c) Specialization Health Intuitions.

Health services in India before independence

Health services in India after independence Current status of India.

Central, State and Local organizations in India.

Relation with other departments

International organizations and their cooperation in the field of Health. (WHO, UNICEF, UNDP (United Nation Development Programme) Voluntary Agencies in Health Programmes.

## **Operation Aspects of National Health Programsd)**

### **Family Welfare Program**

- e) Maternity &
- f) child Health Service
- g) National Malaria Eradication program.
- h) National Filarial Control program
- i) National Leprosy program
- j) Diarrheas Disease Control program
- k) STD Control program
- l) Goiter Control program
- m) Blindness Control program
- n) Universal Immunization program

### **PUBLIC HEALTH PROGRAMMES IN INDIA**

#### **Course Content**

#### **1. Public health programmes**

Rural development - concept and organization.

Progress of health activities under developmental programmes; health centre concept - definition, organization and functions; role of health centre in health programmes; role of Health Workers in a Primary Health Centre.

Maintenance of supplies and equipment and other facilities, records and reports.

Health records, family care records, medical records.

Use of diaries by Health Workers.

Understanding the system of reporting and recording. Referral system.

#### **2. Organization and structure of health services and related welfare services.**

Health services at Central, State, District, Taluk, Tehsil and village level.

Multipurpose Workers Scheme, Health Scheme Training programme Rural

Health Services- Primary Health Centres and schemes. Urban health services- health, units in Corporations and municipal boards; organization of health services.

Supplemental health services -indigenous medical practitioners; traditional heaters; private practitioners.

Voluntary health agencies.

International agencies-WHO, UNICEF, FAO.

Community development programmes and health structure and activities at block level. Social Welfare services and programmes.

### 3. Health planning and programmes

Five Year Plans - health sub-sectors in five year plan, implementation of health plans at village, district, State and National levels.

Major health programmes related to:

Malaria, Filariasis, Tuberculosis, Leprosy, Trachoma, STD, general diseases.

Goitre, water supply and sanitation, family welfare and nutrition programmes.

Role of Health Worker in implementing national health plans and programmes.

Identifying functions of Health Workers in relation to major national health

plans and programmes-Health Worker's responsibilities at village level and

subcentre level in implementation of health plans and programmes.

Cooperation and coordination with members of health team, social welfare team, village community and community development team.

#### National health programmes

#### National health programmes

Needs, Aims, plan of operation, methods, achievements. Shortfalls, reasons thereof and of recurrence, special importance of

Surveillance and epidemiological investigation, measures to

improve performance, role of health education; differences between control and eradication programmes.

1. National Malaria Eradication Programme
2. National Leprosy Control Programme.
3. National Tuberculosis Control Programme
4. National Filariasis Control Programme
5. Cholera Control Programme
6. STD Control Programme
7. Trachoma control Programme
8. Goitre Control Programme.
9. National Rural Health Mission (NRHM): incorporating AYUSH, IPHS and PRI
10. National Urban Health Mission (NUHM)
11. Reproductive and Child Health Programme (RCH)
12. National Vector Borne Disease Control Programme (NVBDCP)
13. National AIDS Control Programme (NACP)
14. Integrated Disease Surveillance Project (IDSP)
15. Integrated Child Development Services (ICDS)
16. National Water Supply and Sanitation Programme
17. National Cancer Control Programme
18. National Programme for Control of Diabetes, Stroke and Cardiovascular Diseases
19. National Mental Health Programme
20. National Programme for Control of Blindness (NPCB)
21. National Iodine Deficiency Disease Disorder Control Programme

## **Awareness of HIV**

### **Fighting AIDS**

At the end of 2011, an estimated 34 million people were living with HIV worldwide, with two-thirds of them living in sub-Saharan Africa. This reflects the continued large number of new HIV infections and a significant expansion of access to antiretroviral therapy, which has helped reduce AIDS-related deaths, especially in more recent years.

The number of people dying of AIDS-related causes fell to 1.7 million in 2011, down from a peak of 2.2 million in the mid-2000s; in 2012 alone 700,000 AIDS related deaths were averted.

### **HIV treatment**

It is estimated that at least 8 million people in low- and middle-income countries are currently receiving HIV treatment, reflecting an increase of 63 percent from 2009 to 2011. Ten low- and middle-income countries (including Cambodia, Rwanda, Swaziland, Zambia and Namibia, among others) have achieved universal access, defined as extending coverage to at least 80 percent of those in need of treatment.

Worldwide, there were more than 500,000 fewer deaths in 2011 than there were in 2005, and the number of AIDS-related deaths declined by nearly one-third during that time.

International efforts as channeled through the Global Fund have been critical; by end 2012 Global Fund-supported programs had provided 1.7 million HIV-positive pregnant women with treatment to prevent transmission to their children, 250 million HIV testing and counseling sessions, the purchase and distribution of 4.2 billion condoms, and more than 19 million basic care and support services have been provided.

### **HIV prevention**

However, HIV continues to spread - in 2011, 2.5 million people were newly infected with HIV. Although this number remains sobering, it is also important to note that 25 countries have seen their numbers of new infections drop by 50 percent or more, and that half of the infections averted worldwide were among newborns, demonstrating that it is possible to eliminate new infections in children.

In countries with generalised epidemics, a combination of behavior changes, including reductions in numbers of sexual partners, increases in condom use, and delayed age of first sex, have reduced new infections in several countries. However, some regions are seeing their rates of infection grow significantly. For example, the number of new infections in the Middle East and North Africa region has grown by more than 35 percent. And Eastern Europe is seeing infection rates climb, particularly among most-at-risk populations.

New tools for prevention are being implemented, as can be seen by large-scale circumcision campaigns, particularly in sub-Saharan Africa.

The increase in coverage of antiretroviral treatment will also aid in slowing new infections. Studies have shown that putting a person on treatment as soon as they are diagnosed can reduce the risk of transmission of the virus by up to 90 percent.

### **Challenges to reversing the spread of HIV**

Thirty years after AIDS was first reported, HIV continues to spread. Existing prevention efforts, although improving, are often insufficiently comprehensive or inadequately tailored to local epidemics.

Epidemiological surveillance systems at the country level also need to be strengthened, particularly where there are key populations at higher risk of HIV infection. For example, studies in Eastern Europe and Central Asia show that many people who inject drugs actively avoid seeking health services due to the risk of ostracism or fears that their health providers will report them to law enforcement authorities. Such obstacles limit individuals' access to basic health services as well as treatment for HIV.

Greater political commitment to implementing evidence-informed programs is also needed if progress is to be made in achieving the Millennium Development Goals.

### **HIV and human rights**

The Global Fund is committed to fighting for the rights of people directly or indirectly affected by HIV and AIDS through the programs it

supports in 151 countries. It works to ensure that these programs address the needs of the poorest, at-risk and marginalized groups.

## **YOGA AND NATURE CURE**

### **Yoga:**

Introduction.

Importance.

Pranayama and its importance.

### **Asanas:**

- a) Salabhasan.
- b) Bhujangasan.
- c) Seershasan.
- d) Comuwhasan.
- e) Suryasan.
- f) Padmasan
- g) Matyasana. Etc.

### **NATURE CURE:**

Introduction.

Importance.

Nature Cure for common diseases like Cold, Cough Fever and Headache etc.

Medicinal Plants:

- a) Introduction.
- b) Importance.
- c) Application etc. Ayurvedic Medicines (As applicable to Public Health; Asogaraj guggul. TriphalaChurna. GandhakRasayana etc.

Homeo Medicines.

(as applicable to preventive medicine)

Belladonna

Arnica. Naxuomica etc...

**Indian system of medicine**

**Indian System of Medicine:** Ayurvedic, Unani, Siddha, Indigenous systems of medicine, Traditional systems of medicine

## Introduction

It is a well-known fact that Traditional Systems of medicines always played important role in meeting the global health care needs. They are continuing to do so at present and shall play major role in future also. The system of medicines which are considered to be Indian in origin or the systems of medicine, which have come to India from outside and got assimilated in to Indian culture are known as Indian Systems of Medicine. India has the unique distinction of having six recognized systems of medicine in this category. They are- Ayurveda, Siddha, Unani and Yoga, Naturopathy and Homoeopathy.

Though Homoeopathy came to India in 18 Century, it completely assimilated in to the Indian culture and got enriched like any other traditional system hence it is considered as part of Indian Systems of Medicine. Apart from these systems- there are large numbers of healers in the folklore stream who have not been organized under any category.

## Treatment aspects

The treatment lies in restoring the balance of disturbed humors (doshas) through regulating diet, correcting life-routine and behavior, administration of drugs and resorting to preventive non-drug therapies known as 'Panchkarma' (Five process) and 'Rasayana' (rejuvenation) therapy. Before initiating treatment many factors like the status of tissue and end products, environment, vitality, time, digestion and metabolic power, body constitution, age, psyche, body compatibility, type of food consumed are taken in to consideration.

## Types of Treatment

The treatments are of different types- a- *Shodhan* therapy (purification treatment), b- *Shamana* therapy (palliative treatment), *Pathya Vyavastha* (prescription of appropriate diet and activity), *Nidan Parivarjan* (avoidance of causes and situations leading to disease or disease aggravation), *Satvajaya* (psychotherapy) and *Rasayan* (adaptogens including immunomodulators, anti-stress and rejuvenation drugs) therapy. *Dipan* (digestion) and *Pachan* (assimilation) enhancing drugs are considered good for pacifying the vitiated doshas (humors).

This therapy is supposed to dissolve the vitiated and accumulated doshas by improving the *agni* (digestive power) and restoring the deranged metabolic



process. In severe conditions the above therapy has to be supplemented with purificatory processes like Panchakarma. In this therapy initially the accumulated vitiated dosha is liquefied by resorting to external and internal oleation of the patient; followed by sudation (*swedhana*) and elimination of vitiated dosha through emesis (*Vamana*) or purgation (*Virechana*), *Basti* (enema-evacuating type) and *Nasya* (nasal insufflation).

*Shodhan* therapy provides purificatory effect through which therapeutic benefits can be derived. This type of treatment is considered useful in neurological and musculo- skeletal disorders, certain vascular or neuro-vascular states, respiratory diseases, and metabolic and degenerative disorders. *Shamana* therapy involves restoring normalcy in the vitiated doshas (humors). This is achieved without causing imbalance in other doshas. In this use of appetizers, digestives, exercise and exposure to sun and fresh air are employed. In the *Pathya Vyavastha* type of treatment certain indications and contraindications are suggested with respect to diet, activity, habits and emotional status. In *Nidan Parivarjanta* type of treatment the emphasis is on avoiding known causes of the disease by the patient. In *Satvavajaya* type of treatment the emphasis is on restraining the mind from the desires for unwholesome objects and *Rasayana* therapy deals with the promotion of strength and vitality.

### **Reference Books:**

1. A Short Book Of Public Health – VK Muthu
2. Introduction to Public Health – 4<sup>th</sup> edition -Mary louise flaming
3. Introduction to Public Health – Flaming and Baldwin
4. Public Health and Epidemiology – Dr . Mrinal Sarmah
5. Community Medicine , Public Health and Health management – Roy Rillera Marzo
6. Public Health Management Principles and Practice – Sunder lal, Vikas
7. Hygiene and Public Health – Victor C . Pederson
8. Short Text Book of Public Health Medicine For the Tropics – Lucas, Gilles
9. Essentiall Public Health Theory and Practice – Watson , Gillam
10. Introducion to Public Health 5<sup>th</sup> edition – Mary Jane Schneider

## Paper-III

### A. Hospital Awareness( 12 Periods )

A brief idea of hospital as an organization management different units of a hospital effective communication skills, communication channel

Maintenance of records

Effective leadership

General patient care

Medical terminologies

Vital signs

Unit preparation

Transporting & Transferring patients

Sterilization Techniques

Control of infection

Medication-Oral & parenteral

Admission-Discharge procedure

Bandages

**Practicals:** Posted in ward & taught clinically

A. Surgical Department

Familiarization of different tubes

1. Drainage tube
2. Post Operative Exercises
3. Post OP Management of Patient
4. Shock of Management
5. Changing Surgical Dressing.

1. Preoperative preparation of patient

2. Preanesthetic preparation

3. Assisting in operation

4. Anaesthesia

5. CSSD

1. Recovery room

2. Movement of papers

3. Scheduling of theatres

4. Supplying of articles

- 5 Specific area practices



As scrubnurse, As circulating nurse

Communication and Computer Skills, Audio & Visual Aids

### **COMMUNICATION( 12 Periods)**

Process, Types of communication, Strategies for effective Communication

Barriers of communication

### **SOFT SKILLS**

Presentation with the use of visual aids such as power point Conversation  
Extempore speech, usage of effective language for communication of health  
work. Case studies and situational analysis, Survey and Reporting

### **COMPUTER**

INTERNET CONCEPTS: Computer : basic MS-Office MS-Word, MS-Excel, MS-  
Power Paint, Browsing, Down-Loading, Use Projector of Slide Projector

### **Reference Books:**

1. Hospital administration and management – joyfeep Das Gupta
2. Hospital administration – DC Joshi
3. A handbook for understanding hospital services – mishra&kaushik
4. Hospital and patient care management – Dr. Vidhta srinivasan
5. Principles of hospital administration & planning

### **Part-C: Patient Related Services( 10 Periods)**

1. Patient Care System
2. Information Management in Patient Care.
3. Concept of Patient Care.
4. Information to Support Patient Care.
5. Historical Evolution
6. Society and Influences
7. Professional practice model
8. Techniques of Patient Care.
9. Development & Innovative implimentation of patient Care.
10. Types, functions, Uses pr Patients & Hospitals

## Reference Books:

1. Principles of hospital practice and patient care – P Srinivasulu Reddy
2. Patient care technician – kimberlytownsend little
3. Hospital supporting services and systems- Dr. M. A. George

## Part D: Basics of central sterilization ( 7Periods )

1. Introduction of sterilization
2. Functions of Sterilization
3. Types of Sterilization
4. Classification of Sterilization
5. Advantages & Disadvantages
6. Details of CSSD& its function & activity
7. Activities of CCSSD

### Reference Books:

1. Disinfection , sterilization and preservation
2. Instrumentation and control systems – Y J Reddy
3. Hand book of biomedical instrumentation – R S Khandpur
4. Biomedical waste disposal – jaypee
5. Sterile processing – karen davis

### Practicals

Visit of Municipality, inspect on of slums. Visiting of Slaughter House.

Participation in all National Health Programmes (Particularly Family Welfare and Universal Immunization Programme)

Visit of PHC/sub centre

Visit of schools in the school health programme.

Study of health hazards in rural areas and their prevention

## Medicinal Plants and Their Uses, Visits to the respective fields

### LIST OF IMPORTANT MEDICINAL PLANTS AND THEIR USES

NB: (Fam - Family, T – Tree, H – Herb, C – Climber, S- shrub)

Plant	Common name / Maturity period	Botanical Name or Family	Parts Used	Average Price( Rs. / Kg )	Medicinal Use
	Amla ( T )After 4th year	Emblica officinalis Fam- euphorbiaceae	Fruit	Rs 15 – 45/kg	Vitamin – C, Cough, Diabetes, cold, Laxativ, hyper acidity.
	Ashok ( T )10 years onward	Saraca Asoca Fam: Caesalpinaceae	Bark Flower	Dry Bark Rs 125/kg	Menstrual Pain, uterine, disorder, De diabetes.
	Aswagandha ( H ), One year	Withania Somnifera Fam: Solanaceae	Root, Leafs	Rs 140/ Kg	Restorative Tonic, stress, nerves disorder, aphrodisiac.
	Bael / Bilva (T)After 4-5 year	Aegle marmelous Fam: Rutaceae	Fruit, Bark	Fruit – Rs 125 / kg Pulp – Rs 60 / Kg	Diarrhoea, Dysentery, Constipation.
	Bhumi Amla ( H ), with in one year	Phyllanthous amarus Fam: euphorbiaceae	Whole Plant	Rs 40 / Kg	Aenimic, jaundice, Dropsy.
	Brahmi ( H ) Indian penny worth/one year	Bacopa, Monnieri Fam: Scrophulariaceae	Whole plant	Rs 20 per kg	Nervous, Memory enhancer, mental disorder.
	Chiraita ( high altituted) with in one year ( H )	Swertia Chiraita Fam: Gentianaceae	Whole Plant	Rs 300- 350 / per kg	Skin Desease, Burning, censation, fever.
	Gudmar / madhunasini, after Four year ( C )	Gymnema Sylvestre Fam: Asclepiadaceae	Leaves	Rs 50 – 75 per kg	Diabetes, hydrocil, Asthama.
	Guggul ( T)after 8 years	Commiphora Wightii Fam: burseraceae	Gum rasine	Rs 80 – 100 per kg	Rheuma tised, arthritis, paralysis, laxative.
	Guluchi / Giloe ( C )With in one year	Tinospora CordifoliaFam	Stem	Rs 20 – 25 per kg	Gout, Pile, general debility, fever, Jaundice.
	Calihari / panchanguliaGlori Lily Five years	Gloriosa superba Fam: Liliaceae	Seed, tuber	Rs 60	Skin Desease, Labour pain, Abortion, General debility.

	Kalmegh/ Bhui neem ( H ) with in one year	Andrographis PaniculataFam : scanthaccac	Whole Plant	Rs 12 - 20	Fever, weekness, release of gas.
	Long peeper / Pippali ( C ) after two to three years	Peeper longum Fam : Piperaccac	Fruit, Root	Rs 100 – 150 per kg Root – 150 per kg	Appetizer, enlarged spleen , Bronchities, Cold, antidote.
	Makoi ( H )Kakamachi/ Wth in one year	Solanum nigrum Fam: Solanaccac	Fruit/whole plant	Rs 40 per kg Seed – 200 per kg	Dropsy, General debility,Diuretic, anti dysenteric.
	Pashan Bheda / Pathar Chur ( H )One year	Coleus barbatus Fam : Lamiaccac	Root	Rs 40-50 per kg	Kidny stone, Calculus.
	Sandal Wood ( T )Thirty years onward	Santalum Album Fam: santalinaccac	Heart wood , oil	Rs 350 per kg	Skin disorder, Burning, sensation, Jaundice, Cough.
	Sarpa Gandha ( H )After 2 year	Ranwolfia Serpentina Fam: apocynaccac	Root	Root – Rs 80 per kg Seed – Rs 300 per kg	Hyper tension, insomnia.
	Satavari ( C )After 2-3 year	Asparagus Racemosus Family: liliaccac	Tuber, root	Rs 20 – 50 per kg	Enhance lactation , general weekness, fatigue, cough.
	Senna ( S )With in 1 year	Casia augustifolia Fam: Liliaceae	Dry Tubers	Rs 500/kg seed Rs1200/k g dry	Rheumatism, general debility tonic, aphrodisiac.
	Tulsi (perennial) Each 3 months	Ocimum sanclum Fam: Lamiaccac	Leaves/Seed	Leaves Rs 10/kg	Cough, Cold, bronchitis,expector and.
	Vai Vidanka ( C ), 2nd year onward	Embelia Ribes Fam: Myrsinaccac	Root, Fruit, Leaves	Rs 40-50 per kg	Skin disease, Snake Bite, Helminthiasis.
	Pippermint ( h ) Perennial	Mentha pipertia Fam:Lamiaccac	Leaves, Flower, Oil	-	Digestive, Pain killer.
	Henna/Mehdi ( S ) 1/25 years	Lawsennia iermis Fam: lytharaceae	Leaf,Flower, Seed	L – 50 /kgPowder-Rs75 perkg	Burning, Steam, Anti Imflamatary.

	Gritkumari ( H ) 2nd-5th yr	Aloe Vera Fam: Liliaceae	Leaves	Fresh L-Rs 5 kg Juice 90 Per Kg	Laxative, Wound healing, Skin bums & care, Ulcer.
	Sada Bahar ( H ) Periwinkle/Nyantara	Vinca rosea/ catharanthus Ros eus Fam :apocyanace	Whole Plant	R-Rs50 per kg L-Rs 25 S-Rs 10 kg	Leukemia, Hypotensiv, Antispasmodic, Atidot.
	Vringraj ( H )	Eclipta alba Fam: Compositae	Seed/whole	Powder- Rs 60/kg	Anti-inflammatory, Digestive, hair tonic.
	Sweet chitrak Perennial ( h )	Plumbago Zeylanica Fam: Plumbaginaceae	Root, Rootbar	-	Appetiser, Antibacterial, Aticacer.
	Rakta Chitrak ( H )	Plumbago Indica Fam : plumbaginaceae	Root, Rootbar	-	Indyspeipsia, colic, inflammation, cough.
	Kochila ( T ) 15 yrs	Strychnos nuxvomica Fam: loganiaceae	Seed	-	Nervous, Paralysis, healing wound.
	Harida ( T )	Terminalia Chebula Fam: Combretaceae	Seed	Rs. 80 per K Powder	Trifala, wound ulcer, leprosy, inflammation, Cough.
	Bahada ( T )	Terminalia Bellerica Fam: comretaceae	Seed, Bark	Fruit – Rs 20/k Powder- Rs 100/k	Cough, Insomnia, Dropsy, Vomiting, Ulcer, Trifala.
	Gokhur ( H ) Crawling Puncture Vine/1 yr	Tribulus Terrestris Fam: Lygophyllaceae	Whole Plant	Plant-Rs 10/K Fruit-Rs 15/k	Sweet cooling, Aphrodisiac, appetizer, Digestive, Urinary.



## ***Paper III – Environmental Sanitation (25 – 30 Periods )***

### **HYGIENE:**

#### **Introduction to hygiene and healthful living**

Concepts of health and disease.

Factors influencing health and healthful living.

Health habits and practices - recognizing positive and negative practices in the community.

Scientific principles related to maintenance of ~ normal circulation

- normal respiration
- normal digestion and elimination
- normal sensory functions
- normal skeletal alignment, joint function and motor functions.

#### **Physical health**

Skin care, cleanliness, clothing; care of the hair, prevention of pediculosis.

Dental care and oral hygiene.

Care of hands, hand washing, care of nails. Hygiene of elimination,

Menstrual hygiene.

Posture, prevention of postural defects; exercise, rest, relaxation and sleep.

Care of the face, footwear; care of eyes, nose and throat,

Food values - nutritious diet, selection, preparation and handling of

food. The health examination; health record; immunity and infections; immunization;

detection and correction of defects; prevention and early treatment of common ailments - common colds, indigestion, headache.

#### **Health in the home**

The home as a center for healthful living.



Household measures for disposal of refuse, waste; latrines and sanitation; ventilation.

Safety in the home; common home hazards.

Sanitation in animal sheds; insects and pests.

### **Mental hygiene and health Introduction,**

Factors contributing to mental health.

Characteristics of mentally healthy person.

Developmental tasks, basic needs.

Emotional stability.

### **Mental hygiene and health in infants.**

Ensuring mentally healthy growth in infants.

Need for comfort, security, protection.

Mental hygiene approach to some problems - feeding, weaning, thumb-sucking, toilet-training.

### **Mental hygiene and health in early childhood**

Ensuring mentally healthy, growth in early childhood; need for security, affection, love, play, constructive activities, adventure. Mental hygiene approach to common problems - negativism, temper tantrums, sleep disturbances, bedwetting, aggressiveness; fears, over-submissiveness.

### **Mental hygiene and health in later childhood**

Ensuring mentally healthy growth in later childhood; need for friendship, games and play, affection; encouraging self-expression; recognition; respecting individual differences. Mental hygiene approach to some problems - speech problems, reading difficulties, learning problems, day dreaming.

### **Mental hygiene and health in adolescence.**

Ensuring mentally healthy growth in adolescence; need for security, recognition, understanding, acceptance; preparation of girls for menstruation; sex education; developing vocational goals; hobbies; discussions and conversation; adventures, organized games; dependence-independence conflict. Mental hygiene approach to some problems - truancy, rebellious behaviour, aggression.

## **Mental hygiene and health in adulthood**

Ensuring mental health in adulthood; need for self-realization; satisfactions on the job; recognition; social relationship; marriage, marital life, parental responsibilities. Mental hygiene approach to some problems-job dissatisfaction, marital problems, failures in achievement of aspirations.

## **Mental hygiene and health in old age**

Ensuring mental health in old age; need for preparation for retirement; economic insecurities; loss of role status related to job and earnings; adjustments in relation to physical condition. Mental hygiene approach to some problems - developing interests, keeping active participation in community life and family affairs.

## **Communication Skills, Computer Skills and Audio-Visual Aids**

**Communication** Elements of communication - sender, message, receiver; channels of communication. Factors influencing communication-factors related to message, sender, receiver, situation; barriers to communication, establishing effective communication, channels for health work

Distortions, misinterpretations, traditional and modern channels; types of communication - verbal and non-verbal, formal and informal, two-way and oneway, face-to-face communication and mass communication; communication patterns in groups.

Evaluating effects of communication -simple tools and methods; informal techniques.

## **Communication skills for health work**

Basic skills for communication; human relations skills; listening skills; writing skills; drawing skills,

Communication for health work through - talks, broadcasts, role-play, group discussions, demonstrations, puppet shows, plays.

Communication within health team; oral and written reports; accuracy - of records and reports; use of language that is effective, concise; communication and learning. Communication with members of the community -approaches, problems.

## **Introduction to audio-visual aids**

Audio-visual aids in health education programmes. Classification of audio-visual aids, e.g. graphic aids, projected aids.

Purposes, limitations of audio-visual aids; sources of audio-visual aids - free materials and inexpensive materials.

## **Selection and utilization of audio-visual aids**

Selecting suitable aids for health work; criteria for selection; audience category, purpose, situation or setting; Health Workers' skills, resources and facilities available.

Effective use of audio-visual aids in terms of purpose of educational effect; Providing information; creating awareness; developing or changing attitudes; developing skills or abilities; learning how to use audio-visual aids that are commonly available.

## **Preparation of audio-visual aids for health work**

Basic skills/competencies-simple drawing, lettering, coloring; preparation and use of low-cost graphic aids and 3-dimensional aids; flash cards; bulletin boards; low-cost models, khadigraphs, graphs and charts, pamphlets and leaflets, flip charts, picture scroll box roller, blackboard. Use of slide projector; interpreting message conveyed by mass media; use of traditional vehicles of communication for village health work.

## **Health Information & Communication of Health Statistics**

### **HEALTH STATISTICS**

Course Content

#### **1. Introduction**

Statistics, vital statistics, health statistics, sources of vital and health statistics - census; registration of births, deaths and marriages; notification of infectious diseases; records of health centre and hospital; health surveys.

Uses of statistics in community health - illustrations regarding use Of statistics.

Definitions -rates; ratio; frequency distribution; arithmetic mean; and the range. Calculations.

Collection of statistical data -factors to be considered.

Role of Health Workers in participating in data collection procedures.

## 2. Health and vital statistics

Definition and uses of -birth rate, death rate, specific death rate, maternal morbidity rate, infant mortality rate, neonatal mortality rate, perinatal mortality rate, expectation of life at birth, prevalence rate, incidence rate, general fertility rate.

Measurements affecting health - nutrition data, housing data, data on social, economic and environmental factors.

Measurements related to services - preventive services, promotive. Services and curative services.

Graphic representation of data; diagrammatic representation of data.

**3. Vital statistics registration procedures** existing system of registration; defects in the present system. Registration Act; birth and death certificates.

Specific methods to improve the system of registration of vital events.

Role of Health Workers in maintaining complete records of vital events.

Interpretation and use of statistical information.

**HEALTH STATISTICS:**To enable the student to have understanding of the terms like statistics and Bio- statistics and their applications and relation to public health - rates and ratio- averages: mean, DRSP, medium and mode- deflation of common rates-Variou types of presenting data. Presentation of data, Necessity of sampling, Types of sampling methods, Analysis of data. Interpretation of data. Morality statistics, Morbidity statistics, Tabulation of Data Histogram, Ogive, pie Chart, Bar chart.

### **HEALTH SURVEY**

- a) Registration of birth, death and mortality
- b) immunization process

### **Public Health Acts**

**PUBLIC HEALTH ACTS:**Collection and dispatch of food samples for analysis and preparation of papers for legal proceeding. Performance of simple household tests to identify adulteration in Milk, ghee, oil, sugar, tea, etc. Acquaintance with the registration, reporting and documentation process for implementation of different acts.

The new Public Health Act is the first significant overhaul of the Health Act since 1893. Parts of the Health Act were updated by the Drinking Water Protection Act (2001) and the Food Safety Act (2002). This new Act will combine and update key provisions of the existing Health Act with the Venereal Diseases Act and the

Public Toilet Act. Other important legislation that supports public health activities are the Tobacco Control Act and the School Act.

The Public Health Act provides the Minister, public health officials, regional health authorities, local governments, and others with important tools available in other jurisdictions such as up-to-date information gathering abilities, modern inspection and ordering abilities and other measures necessary to respond to public health emergencies.

The Public Health Act is a product of extensive stakeholder consultations.

Significant changes to the new Act include:

- The modernization of powers and duties of public health officials for communicable disease prevention and control, environmental health hazard response, chronic disease and hazard prevention, and public health emergency response; e.g. updated inspection powers, powers to issue orders, quarantine and isolation provisions.
- Improved health monitoring abilities such as being able to require the reporting of indicators of hazardous environmental exposures e.g. blood levels of lead and mercury;
- The ability of health officers to order groups of people to take prevention measures to control a health hazard. Previous to this new provision, each individual affected by a health hazard had to be issued a separate and unique order. After the SARS outbreak, public health officials identified the need for more effective management strategies to cope with groups of potentially infected people;
- Ability to require public health planning;
- New powers to regulate operations, activities or conditions that could pose a health hazard or a threat to long-term population health;
- Provisions that ensure administrative fairness;
- Strengthened relationships with and clarification of responsibilities of local governments regarding public health; and
- Modernization of enforcement, sentencing, and penalty provisions.

The new Public Health Act reflects and supports many of key public health objectives raised by the Conversation on Health, such as more proactive measures to promote health and prevent disease and injury. The Conversation noted a strong desire for better environmental protection, better availability of immunizations, and a need to strengthen the public health system's ability to address infectious disease outbreaks.

Issues raised in the Conversation on Health addressed by the Public Health Act are:

- Health protection and environmental health issues. The Public Health Act will allow development of mandatory reporting provisions in addition to those currently in place for communicable diseases to ensure that necessary information is collected for public health interventions and monitoring the health of the public. These provisions will allow for monitoring of body levels of pollutants (e.g. lead, mercury) and contribute to preventing the potential negative health effects associated exposure to environmental contaminants and poisonings.
- The Act provides health officials the authority and tools to prevent and control the spread of disease and other health hazards by allowing for preventive interventions (e.g. vaccination, ordering examinations and quarantine). The Act strengthens the inspection and enforcement powers of health officials which enable them to monitor and ensure compliance with the Act, enter places, engage the assistance of peace officers, and obtain warrants and court orders. During a public health emergency, such as a pandemic flu outbreak, public health officials have additional authority to respond immediately to protect the public from significant harm.
- Health Promotion. The Public Health Act allows the minister to require development of public health plans. The purposes of public health plans could include: promoting and protecting the health and well being of British Columbians, identifying the needs of specific populations (i.e. aboriginals, new immigrants), addressing mental health and substance use issues, and preventing and mitigating the adverse affects of diseases, disorders, disabilities, and injuries.
- **PUBLIC HEALTH ACTS** :  Indian Epidemic Diseases Act.
- Purification of Air and Water Pollution Acts.
- Prevention of Food adulteration Act.
- Birth and Death Registration Act.
- N.T.P ACT.
- Suppression of immoral Traffic Act (SITA).
- Municipal and local body Acts related to housing, sanitation etc.
- Factory Act and Employees State Insurance Act.

### **Practicals**

Preparation of Health records.

Visits of Festivals and Fairs.

Visiting of Sewerage board.

Visit the Milk project.

Visit of vegetable market and meet market. Visit of Cinema theatres.

Visit of Water purification plant.

### LIST OF VISITS DURING THE TWO YEARS COURSE STUDY

1. Practical Training in Immunization.
2. . Practical training in Communicable disease clinic.
3. . Treatment of Minor Ailments at affiliated hospitals.
4. Practical Training in Home Nursing.
5. Training in Vital Statics, training in Health records.
6. Training in Festivals and Fairs.
7. Training in Industrial Hygiene.
8. Visit of Super Specialty Hospitals.
9. Practical Training in First Aid Bandages, Sings, bleedings point and areas hemorrhages.
10. . Visit of Municipality, inspect on of slums.
11. . Inspection of Hotels, Lodges.
12. . Visiting of Slaughter House.
13. Visiting of medical college, museums.
14. . Visiting of Sewerage board.
15. Training in Nutrition, Nutritional Survey, and balanced diet.
16. Participation in all National Health Programmes (Particularly Family Welfare and Universal Immunization Programme)
17. Practical Training Laboratory Work: Sterilization, preparation of disinfectant solutions etc.
18. Practical Training in Specimen collections.
19. Practical Training in Blood, H. B., R. B - C., W. B. C., E. S. R., M. P., and F. P. Septum AFB. Motion, cysts, Vova. Urine, albumin, sugar, microscopic.
20. Visit of milk project.
21. Visit of vegetable market and meet market.
22. Visit of Cinema Theatres.
23. Visit of PHC' sub centres.
24. Visiting ware houses.
25. Visit of schools in the school health programme.
26. Study of health hazards in rural areas and their prevention.

27. Visit of water purification plant.
28. Visit of T.B. Hospital/ sanatorium.

### Reference Books :

1. Text Book of Environmental Hygiene – Lt. Col. KK Gill
2. Essentials of Environmental Sciences and Hygiene – Rawat, Kaur
3. Environmental Sanitation Health – P.S.K Menon
4. Environmental Health Science and Ecotoxicology- IGNOU
5. Environmental Sanitation- D. K . Thakur
6. Environmental Hygiene and Communication Skills – Dr .SS  
Randhawa
7. Environmental Pollution & Human Health – Dr . Yogendra Kumar  
Joshi
8. Environmental Law – S.C. Tripathi
9. Water Environment and Sanitation Assessment – Ritu

### Practicals:

1. Labeled Diagrams of different organs and bones vivo.
2. Collection of sample, Hb Estimation, TLC and DLC, RBC Count, Peripheral blood film-staining and study of Malarial Parasite.
3. Laboratory management- Sample Collection, Labeling, Transport.
4. Staining-Type of Staining, Principal, Procedure and Interpretation.

### Lab equipment:

Sufficient books, Journals, Audio

Video Aids Charts, Model Kits ,Anatomical  
Models.

Television and Video Cassette Recorder

Necessary Laboratory Equipment, Blood Pressure Apparatus

Stethoscope, Foetoscope, Height&

Weight Machines as prescribed by

the Andhra Pradesh Para Medical Board



## **Paper –I**

- ⇒ Home nursing & elementary medical care
- ⇒ Preparation of drugs (capsules, tablets, pills, powder, ointment, pastes, poultices, plasters)
- ⇒ weighing accuracy & calculations





# Dr S Pawar Institute of Paramedical Sciences College

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2. **Admission Helpline - 040 49534410,8074507008,8008297414,9701270981**

3. **Route Map :-**

