SYLLABUS FOR DIPLOMA IN PUBLIC HEALTH (D.P.H)

Goal : -

The candidate during and after the training should be able to implement the knowledge, skills & advances of public health for prevention, control, elimination of diseases of public health importance.

Objectives: -

Knowledge

a) The candidate should have the knowledge regarding epidemiology, prevention, control & management of diseases of public health importance.

b) Knowledge of all relevant public health laws and institutions of public health importance.

c) The candidate should be able to discharge his/ her duties effectively in an administrative capacity in a health organization such as Municipal Corporation.

Skills

a) Should acquire administrative skills essential for smooth functioning of health establishments

b) Should the able to conduct epidemiological investigation of various diseases during epidemic.

c) Should know the criteria for sanitation of various place viz slaughter house, eateries, sewage treatment plants, ports & airport, milk dairies and be in position to inspect & recommend corrections.

d) Should be able to plan, implement & evaluate school health services

e) Should be able to plan, implement & evaluate programmes related to Occupational Health.

DETAIL SYLLABUS:

1) <u>Introduction –</u>

1.1 Prevention of diseases in the community
1.2 health situation- past & present
1.3 History of public health
1.4 Place & role of preventive medicine in development of social medicine, community health, community medicine.

2) <u>Applied aspects of Preventive Medicine</u> –

2.1 Health
- **2**.1.1 Changing concepts
- 2.1.2 Definition
- 2.1.3 Dimensions
- 2.1.4 Concepts of wellbeing
  a) PQLI
  b) HDI
- 2.1.5 Spectrum of Health
- 2.1.6 Determinants of Health
- 2.1.7 Rights & responsibilities
- 2.1.8 Indicators of health
  a) Mortality
  b) Morbidity
  c) Disability
  d) Others
- 2.1.9 Health care system
  a) Characteristics
  b) Levels
  c) Primary Health Care

2.2 Disease
- 2.2.1 Concept
- 2.2.2 Natural history of diseases
  a) Epidemiological triad
  b) Risk factors

2.3 Concepts of control
2.4 Concepts of prevention
- 2.4.1 Modes of interventions
- 2.4.2 Levels of preventive health services (urban & rural)

2.5 Health Management

3) Biostatistics
- 3.1Introduction
- 3.2 Data
  - 3.2.1 Sources & uses of data.
  - 3.2.2 Types of data
  - 3.2.3 Collection & Presentation
- 3.3 Centering constants
  - 3.3.1 Measures of variation
  - 3.3.2 Normal, Binomial & Poisson distribution

3.3.3 Concept of probability
3.4 Sampling methods
3.5 Test of significance
3.6 Correlation & regression
3.7 Clinical Trial
3.8 Statistical fallacies
3.9 Non-parametric tests
3.10 Statistical exercises
3.11 Operational research.
3.11 Vital statistics
3.11.1 Sources of vital statistics
3.11.2 Registration system
3.11.3 Definition & uses
3.11.4 Morbidity & mortality rates
3.11.5 Standardization of death rates
3.11.6 Life –table
3.11.7 Fertility rates
3.12 Use of computers & their application in Public Health.

4) Environment & Health –
Planning and management for provision of safe water

4.1 WATER
4.2. Water in relation of health & diseases
4.2.1 Sources & uses
4.2.2 Pollution
4.2.3 Purification
a) <u>On large scale</u>
i) Storage
ii) Filtration
iii) Disinfection
b) <u>On small scale</u>
i) Household level
ii) Disinfection of well
4.2.4 Quality
a) Criteria & standards
4.2.5 Hardness of water
4.2.6 Swimming pool sanitation
4.2.7 Horrock's apparatus
4.2.8 Public health laboratory and its functions in this context
4.3 Air & health
4.3.1 Indices of thermal comfort
4.3.2 Pollution
a) Sources
b) Pollutants
c) Monitoring
d) Effects
e) Prevention & control
4.4 Housing
4.4.1 Social goal
4.4.2 Standards
4.4.3 Housing & health

4.4.4 Overcrowding
4.4.5 Indicators

4.5 Industrialization & health

4.6 Radiation & health
4.6.1 Sources
4.6.2 Types
4.6.3 Units
4.6.4 Biological effects
4.6.5 Protection

4.7 Air temperature
4.7.1 Measurement
4.7.2 Effects of heat on human health
4.7.3 Effects of cold on human health
4.7.4 Global warming

4.8 Hazardous wastes & health
4.8.1 Planning and management of safe disposal of solid waste
4.8.2 planning and management of safe disposal of bio-medical waste

4.9 Noise & health
4.9.1 Sources
4.9.2 Properties
4.9.3 Effects
4.9.4 Control

4.10 Safe Disposal of Municipal waste
4.10.1 Liquid waste
4.10.2 Solid Waste

5) Nutrition & health

5.1 Chemistry & physiology of food
5.2 Nutritive value of food & planning of balanced diet
5.3 Food processing & preservation
5.4 Nutritional problems
5.4.1 LBW
5.4.2 PEM
5.4.3 Xerophthamia
5.4.4 Nutritional anaemia
5.4.5 IDD
5.4.6 Endemic flurosis
5.5 Nutritional factors in selected diseases
5.6 Nutritional assessment
5.7 Nutritional surveillance & growth monitoring
5.8 Food hygiene- inspection & legal provisions
5.9 Food toxicants, food addition, food fortification, food adulteration
5.10 Food standards
5.11 National Nutrition Policy & Programmes
5.12 Applied aspects of nutrition (dietetics)
5.13 I.F.S.A. and BPMC acts in relation to prevention of food adulteration and various licencing procedure related to them

6) Epidemiology

6.1 Definition & aims
6.2 Epidemiological approach
6.3 Basic measurement in Epidemiology
6.4 Types of Epidemiological studies
6.4.1 Observational
a) Descriptive
b) Analytic
6.4.2 Experimental
6.5 Association & causation
6.6 Uses of Epidemiology
6.7 Infectious disease Epidemiology
6.8 Investigation of an epidemic of Leptospirosis, Malaria, Dengue in Urban set Up & in post disaster situations
6.9 Health advice to travelers
6.10 Disinfection
6.11 Control of hospital acquired infections
6.12 Screening for diseases

7) Microbiology

7.1 General characteristics & morphology
7.2 Laboratory techniques used in the study of microbial agents of public health importance.
7.3 Collection & forwarding of different samples for bacteriological & serological analysis
7.4 Serological reactions
7.5 Immunity.

8) Protozoatogy

8.1 General characteristics
8.2 Classification & Morphology
8.3 Disease causation
8.4 Laboratory techniques used in the study & control of protozoal infestations of public health importance.

9) Entomology

9.1 General characteristics
9.2 Classification & Morphology
9.3 Bionomics
9.4 Disease transmission & control of insects of public health importance.

10) Helminthology

10.1 General characteristics
10.2 Classification & Morphology
10.3 Life cycle of helminthes
10.4 Natural history of diseases
10.5 Prevention & control of helminthes of public health importance

11) Epidemiology of communicable diseases

11.1 Exanthematous fevers
11.2 Air borne infections
11.3 Contact infections
11.4 Water-borne & food borne disease
11.5 Vector-borne diseases
11.6 Zoonotic diseases
11.7 Surface infections
11.8 Emerging & re-emerging infectious diseases
11.9 Hospital acquired infections
11.10 National Health programmes for control/ elimination/ eradication of communicable diseases.

12)Epidemiology of non-communicable diseases

12.1 Cardiovascular diseases
12.2 Cancer
12.3 Diabetes mellitus
12.4 Disasters
12.5 Blindness
12.6 Accidents
12.7 Obesity.

13)Mental health

13.1 Health & diseases
13.2 Concept of
a) Normality
b) Mental health
13.3 Magnitude of the problem
13.4 Prevention of mental diseases
13.5 Alcohol related & drug related problems
13.6 Mental health services in India.

14)Geriatrics

14.1 Concept of Aging
14.2 Demographic scenario
14.3 Principles of underlying preventive geriatrics,
14.4 Preventive strategies for improving quality of life.

15)Reproductive & Child Health (RCH)

15.1 Introduction
15.1.1 Mother & Child as one unit
15.2 Care of mother during
15.2.1 Antenatal period
15.2.2 Intranatal period
15.2.3 Postnatal period
15.3 Care of children
15.3.1 Neonatal care
15.3.2 Care of infant
a) Feeding of infants
b) Immunization
15.4 Care of pre-school child
15.5 Growth & development

15.6 School health
15.7 Adolescent health
15.8 Indicators of RCH services
15.9 Reproductive & child health (RCH) Programme & services
15.10 Postpartum Programme
15.11 Family welfare programmes
15.12 Child labour.

16) Social sciences

16.1 Medical sociology
16.2 Social Anthropology
16.3 Introduction to social sciences & their application in public health.

17) **Medical Ethics**

18) Demography & Population Control

18.1 Introduction
19.1.1 Definition
19.1.2 Demographic cycle
19.1.3 Population Pyramid
18.2 Fertility
19.2.1 Factors affecting fertility
19.2.2 Indicators of fertility
18.3 Population explosion as a public health problem
18.4 Approaches for population control.
19.4.1 Family planning
i) Definition
j) Scope
k) Health aspects
l) Methods
i) Spacing methods
ii) Terminal methods
18.5 Delivery system
18.6 National family welfare programme

19)Occupational Health

19.1 Definition
19.2 Ergonomics
19.3 Occupational diseases & their prevention
19.4 Occupation related legislation
19.5 Sickness absenteeism
19.6 Social security
19.7 Organization of services.

20) National Health Programme in India

201 National Anti Malaria Programme
20.2 Revised National Tuberculosis control Programme
20.3 National Leprosy Elimination Programme
20.4 National Filaria Control Programme
20.5 National Family Welfare Programme
20.6 Universal immunization Programme
22.7 Reproductive & child health Programme

20.8 ICDS
20.9 National Programme for control of blindness
20.10 National Cancer control Programme
20.11 National water supply & sanitation Programme
20.12 National mental health Programme
202.13 National AIDS control Programme
20.14 National Acute Diarrheal Disease control Programme
20.15 National Iodine Deficiency Disorder control Programme

21) Health care delivery system

21.1 Patterns of health care delivery
21.2 History of development of health care delivery system in India
21.3 Reports of different committees
21.4 Three–tier health care delivery system
21.4.1 Primary health center
21.4.2 Subcentre
21.4.3 CHV
21.5 Urban health infrastructure.

22) H**ealth management & health planning**

22.1 Definition
22.2 Planning cycle
22.3 Management methods & techniques (PERT, CPM)
22.4 Personnel, financial & material management.
22.5 Principles of planning of health services at district/ PHC level.
22.6 Activity planning for epidemics, floods refugees
22.7 Hospital Management.

23) Health Economics

23.1 Basics of Health Economics
23.2 Cost trends, Demand & Supply
23.3 Price Elasticity
23.4 Health Insurance
23.5 Ginni Co efficient, Kankavani index

24) International Health & Telemedicine

25) Public health administration including relevant laws & Public Private Partnership
like Chiranjivi Yojana, Baal Sakha yajana , EMRI

26) Health Education & Communication

27) Role of NGO in health care delivery system

28) Public Health Chemistry

Training Schedule:-

2 Years

Title of theory Papers with contents : -

Theory examination (3 papers).
Each theory paper shall be of 100 marks. The total marks of theory examination will be 300 marks. Topics for paper I, II, III shall be as follows -

Paper I: - Basic Sciences

Includes General concepts in prevention of disease, Biostatistics, General principles of Epidemiology & screening, basics of Microbiology, basics of Protozology, Entomology, Genetics, Prevention of accidents, Disaster Management, investigation of public health problems as relevant to basic sciences for a health officer, Public Health Chemistry and other important aspects of basic sciences as related to public health.

Paper II: - Public Health

Includes all topics as covered in health and sanitation, epidemiology of communicable & Non-Communicable diseases and investigation of public health problems/ diseases/ disasters/ epidemics as relevant in public health for a health officer, strategies for control of diseases of important public health problems.

Paper III: - Aspects of Community Medicine

Includes Epidemiology, prevention, control & management of communicable & Non-Communicable diseases, National Health Programmes, RCH, & F.W., Demography, Occupational health. Nutrition, Environment & Health, social science, International Health mental Health, Genetics, Geriatrics, Concepts of Health & Disease, Health Education, health planning & management, school health, health economics Information System, hospital waste management, Disaster management, Hospital Acquired Infection, International Health, Basics of Medical Ethics.

EVALUATION OF STUDENTS FOR DPH

Practical 400 marks, which shall include,

Long case	150 marks
Short case(s)	50 marks
Short case(s)	50 marks
Grand Viva	100 marks
Spots, including epidemiological chart	30 marks
Epidemiology/ Biostatics exercise	20 marks

Practical: -

a) **Family Cases**
Chronic/ Non-communicable diseases such as Hypertension, Diabetes etc.
Communicable diseases such as Tuberculosis, Filariasis etc.
Nutritional disorders such as Malnutrition
Pregnancy and related disorders
Any other diseases of public health problem and field investigations that may be

b) Short Cases: As selected and relevant to the course settings, these include exercises such as those related to the environment.

c) **Statistical & epidemiological exercises:** As selected and relevant to the course settings

d) Spots: As related to public health.