

MAHARASHTRA STATE BOARD OF VOCATIONAL EDUCATION EXAMINATION, MUMBAI 51

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|----|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------|--------|----------|---------------|---------------|
| 1 | Name of Syllabus | C. C. in Disaster Management (411212) | | | | | | |
| 2 | Max.Nos of Student | 25 Students | | | | | | |
| 3 | Duration | 1 Year | | | | | | |
| 4 | Type | Part Time | | | | | | |
| 5 | Nos Of Days / Week | 6 Days | | | | | | |
| 6 | Nos Of Hours /Days | 4 Hrs | | | | | | |
| 7 | Space Required | Workshop = 300 Sq feet Class Room = 200 Sq feet TOTAL = 500 Sq feet | | | | | | |
| 8 | Entry Qualification | S. S. C. | | | | | | |
| 9 | Objective Of Syllabus/ introduction | A main objective of Disaster Management course is to acquaint the students with the philosophy, approaches and theories as an academic as well as professional field. | | | | | | |
| 10 | Employment Opportunity | Can work independently or work in social non government organization disaster management organization | | | | | | |
| 11 | Teacher's Qualification | Graduate with 2 yrs exp in relevant field | | | | | | |
| 12 | Training System | Training System Per Week | | | | | | |
| | | Theory | | Practical | | Total | | |
| | | 06 Hours | | 18 Hours | | 24 Hours | | |
| 13 | Exam. System | Sr. No. | Paper Code | Name of Subject | TH/PR | Hours | Max. Marks | Min. Marks |
| | | 1 | 41121211 | FUNDAMENTALS OF DISASTER MANAGEMENT | TH -I | 3 hrs | 100 | 35 |
| | | 2 | 41121212 | DISASTER MANAGEMENT MECHANISMS | TH-II | 3 hrs | 100 | 35 |
| | | 3 | 41121213 | RESCUE AND C.P.C.R | TH-III | 3 hrs. | 100 | 35 |
| | | 4 | 41121221 | REMOTE SENSING & GIS IN DISASTER MANAGEMENT | PR-I | 3 hrs | 100 | 50 |
| | | 5 | 41121222 | RESEARCH METHODS IN DISASTER MANAGEMENT | PR-II | 3 hrs | 100 | 50 |
| | | 6 | 41121223 | RESCUE AND C.P.C.R | PR-III | 3 hrs. | 100 | 50 |
| | | | | Total | | | 600 | 255 |

Theory - I FUNDAMENTALS OF DISASTER MANAGEMENT

Definition and Concept of Hazard, Risk, Vulnerability and Disaster

☐ Meaning, Nature, Characteristics and Types of Disasters

☐ Foundations of Disaster Studies: Review of Concepts

☐ Historical Developments: Western vs Oriental discourse on disaster Studies

☐ Globalization and Disaster Studies

Social Science and Domains Approach

Natural Science Approach

☐ Applied Science Approach

☐ Critique of Approaches

☐ Behavioral; Complexity; Mutuality; Structural. Theories:

☐ Models: Pressure and Release (PAR); Access Model; Risk Factor Model

☐ Disaster Management: Meaning, Concepts, Principles, Scope, Objectives and Approaches

☐ Elements of Disaster Management.

☐ Disaster Mitigation: Hazard Assessment, Vulnerability Assessment, Risk Assessment, Protective Measures and Public Information.

Disaster Preparedness: Disaster Plan, Damage Inspection, repair and Recovery procedures, Communication and Control Centers, Disaster Forecasting, Warning and Prediction.

☐ Disaster Relief: Rapid Damage Assessment, Search and Rescue operations, Evacuation and Shelter, Food and Medical Supply, Mass Media Coverage, Relief Aid, Maintaining Public Order.

☐ Reconstruction Planning: Meaning and Significance.

☐ Economic and Social Rehabilitation

DISASTERS IN INDIA

Regionalization of India on the basis of Disasters: Earthquakes, Droughts and Floods.

Earthquakes: Case studies: Kangra, Bhuj, Latur, Kutchh, Uttarkashi

Landslides and Avalanches: Case studies along major river basins.

Cyclones: Case studies of Coastal areas of Bay of Bengal and Arabian Sea.

Floods and Cloud Bursts: Case studies along river basins

Droughts and Desertification.

Chemical and Industrial Disasters

Urban Disasters: Case Studies of Metropolitan Regions: Delhi and Mumbai

Theory - II - DISASTER MANAGEMENT MECHANISMS

- ☐ Institutional Framework of Disaster Management in India
- ☐ Stakeholders in Disaster Management.

- ☐ National/Central Level Management: Nodal Agencies
National Disaster Management Authority.

- ☐ State Authorities, local groups and committees: State, District and Local Level Management
- ☐ Community Participation in Disaster Management and Risk Reduction

- ☐ Role of the following in Disaster Management:
 - ☐ NGO, Private Organizations
 - ☐ Army and Police
 - ☐ Educational Institutions

Finance and Insurance in Disaster Management

- ☐ Definition, nature, role and importance of Insurance
- ☐ Kinds of Insurance and Process of Insurance
- ☐ Insurance assurance and re-insurance.
- ☐ Insurance and Disaster management
- ☐ Role of Macro Insurance in Disaster Management
- ☐ Risk Management Objectives (i.e., economic effects) explicit
- ☐ Quantify the Risks; Assessment of Damage for Insurance
- ☐ Risk Management Products
- ☐ Dynamic Financial Analysis (DFA)
- ☐ Community Perception of Disasters and Insurance Decisions.
- ☐ Role and Importance of finance in disaster management.
- ☐ Disaster Finance and Risk Reduction-Private Sector Participation
- ☐ Role of World Bank in Disaster finance and Risk Reduction
- ☐ Financing Disaster Risk in India

NATURAL AND HUMAN INDUCED DISASTERS

- Classification of Disasters; Conceptualizing the interface between environmental degradation and disasters
- Natural Disasters I: Earthquakes and Tsunamis; Volcanic Eruptions; Landslides and Avalanches
- Natural Disasters II: Cyclones; Forest-fires; Droughts and Desertification; Floods
- Human Induced Disasters I: Nuclear Disasters; Chemical Disasters; Soil and Water Pollution
- Human Induced Disasters II: Global warming; Biological Disasters: Epidemics

Practical - I

REMOTE SENSING & GIS IN DISASTER MANAGEMENT

- ☐ Fundamentals of Remote Sensing
- ☐ Fundamentals of Geographic Information System (GIS)
- ☐ Global Positioning System (GPS)

- ☐ Disaster Management: Geoinformatics Perspective
- ☐ Disaster Mitigation: Hazard Analysis and Mapping; Risk and Vulnerability Assessment; Structural and Non Structural Measures.

- ☐ Disaster preparedness: Contingency Planning; Warning and Evacuation; Consolidated Preparation for next Disaster.
- Disaster Emergency: Provision for Search, rescue and First Aid; Immediate Relief: Food, Water, Cloth; Shelter and Medical Care; Assessment Survey: Economic damage, Death toll etc.

- ☐ Rehabilitation: Restoration of basic services and functions
- ☐ Reconstruction: Reconstruction of services and long-term preventive measures.

Practical - II

RESEARCH METHODS IN DISASTER MANAGEMENT

- ☐ Scientific Investigation: Definition, scope and objective, types, approaches and significance.
- ☐ The research process: the broad problem area, preliminary data collection, problem, selection and definition, theoretical framework, hypothesis development and elements of research design.
- ☐ Experimental design: the laboratory experiment, variables, validity, types of experimental designs.

- ☐ Data collection, Measurement, processing and analysis: collection, processing and analysis; measurement in research, operational definition, measurement scales, scaling; scaling techniques, reliability and validity; sources of data; data collection methods: interviewing, questionnaires, other methods of data collection; review of statistical data analysis.

- ☐ Sampling: Need and purpose of sampling, population and sample, population frame, sampling with and without replacement, population parameters.
- ☐ Sampling theory—sampling distributions, parameter estimation, hypothesis testing. Sampling designs – probability and non-probability sampling

- ☐ Report writing: the research proposal, the report, integral parts of the report, steps involved in report writing, types of reports, oral presentation, conclusions.

THEORY - III
PART A
RESQUE / C.P.C.R. (THEORY)

| No. | Chapter No. | Details of chapter |
|-----|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Rope | Loop Types of loop Knot Types of knot a)Thumb knot b)Clove Hitch knot c)Improvised Ladder d)Reef knot e) sheet knot f) Blow line knot g) Chair knot h) Draw Hitch knot i) Timber Hitch and Half Hitch knot |
| 2 | Lift | Human lifting methods by single person a)Human Crutch b)Cradle Method c) Pick a- Back d) Pick a- Back Reverse e) Fireman's Lift f)Drag Method g)Fireman's Crawl h) Bow line Drag Human lifting method by two person a) Two hand seat b) Three hand seat c)Four hand seat d)Fore and Aft method |
| 3 | Stretches | Types of Stretches a)Blanket stretchers b)Blanket and rope stretchers c) Bandage stretchers d) Rope stretchers |
| 4 | First aids | i)General Principles Aims of first aid, First Aider, Qualities of first Aider Important tasks of First Aider ii)First Aid Actions at an Emergency site a) Approach b) Important rule c)Assessing the situation d)Safety during the Assessment of the situation e)Appropriate use of Bystanders f)Determining the priorities g)calling for assistance h)Points to be considered while passing information to authorities i)How to handle multiple casualties and injuries iii)First Aid Kit a) Important points regarding first aid kit b) Contents of first aid kit iv)Steps in First Aid v)Spinal injury recovery position a)steps vi)First Aid to a patient with convulsion a)Definition b)Symptoms c) First Aid steps d)Don't in convulsions vii)First Aid in Poisonings a)Definition)Routes of entry c)First Aid viii)Specific Poisoning in Disaster a)Carbon monoxide b) Insecticides)Corrosive poison d)Food poisoning)Industrial poisoning |

THEORY III
PART B
RESQUE / C.P.C.R.

| No. | Chapter No. | Details of chapter |
|-----|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Triage method | i) Grouping of triage ii) Necessity and implementation |
| 2 | Bleeding | Types of bleeding ii) Controlling of bleeding |
| 3 | Fracture | i) types of fracture ii) supporting system of fracture |
| 4 | First aids | Points to be considered while passing information to authorities i) How to handle multiple casualties and injuries ii) First Aid Kit a) Important points regarding first aid kit b) Contents of first aid kit iii) Steps in First Aid iv) Spinal injury recovery position a) steps v) First Aid to a patient with convulsion a) Definition b) Symptoms c) First Aid steps d) Don't in convulsions vi) First Aid in Poisonings a) Definition b) Routes of entry c) First Aid vii) Specific Poisoning in Disaster a) Carbon monoxide b) Insecticides c) Corrosive poison d) Food poisoning e) Industrial poisoning |
| 5 | C.P.C.R. | a) Air way b) Breathing c) Circulation d) Artificial Respiration e) Heart Attack |

PRACTICAL III
PART A
RESCUE AND C.P.C.R...
LIST OF PRACTICALS

1. To practice Thumb Knot
2. To practice Clove Hitch or Anchoring Knot.
- 3 To practice Improvised Ladder Knot.
- 4 To practice Reef Knot.
- 5 To practice Sheet Band Knot.
6. To practice Bowline Knot.
- 7 To practice Chair Knot.
- 8 To practice Draw Hitch Knot
9. To practice Timber Hitch and Half Hitch Knot.
10. To perform single person lifts method- Human Crutch.
- 11 To perform single person Lifts method- Cradle
- 12 To perform single person Lifts method- Pick –A- Back
- 13 To perform single person Lifts method- Pick –A- Reverse.
- 14 To perform single person Lifts method- Fireman’s
- 15 To perform single person Lifts method- Drag
- 16 To perform single person Lifts method- Fireman’s Crawl
- 17 To perform single person Lifts method- Bow Line Drag.
- 18 To perform double person Lifts method Two Hand Seat
- 19 To perform double person Lifts method Three Hand Seat
- 20 To perform double person Lifts method Four Hand Seat
- 21 To perform double person Lifts method Fore and AFT Seat
- 22 To perform Blanket Stretcher method
- 23 To perform Blanket and Rope Stretcher method
- 24 To perform Bandage Stretcher method
- 25 To perform Rope Stretcher method

PRACTICAL III
PART B
RESCUE AND C.P.C.R.
LIST OF PRACTICAL.

1. To study the Triage Assessment.
2. To learn the common condition of Triage.
3. To learn the controlling of Bleeding.
- 4 To learn the supporting system of fracture.
- 5 To study the steps of Spinal Injury Recovery Position .
6. To study the steps of First Aid to a patient with convulsion .
- 7 To study the First Aid in Poisoning.
8. To learn the Specific Poisoning in disaster.
9. To practice the artificial respiration methods.
10. Practice for counting of Heart-Beats (Nadi).
- 11 To learn the method of First Aid for Heart-Attack .
- 12 To learn the method of First Aid for Drowning.
