Training Regime for Disaster Response

(Volume – I)

National Disaster Management Authority
Government of India

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Foreword

The DM Act 2005 envisages a paradigm shift from the erstwhile response centric syndrome to a proactive, holistic and integrated management of disasters with emphasis on prevention, mitigation and preparedness. This national vision, inter alia, aims at inculcating a culture of preparedness among all stakeholders and training of different stakeholders is the most important tool to achieve this end. In future, the key to efficient disaster response will depend primarily on effectiveness of training and re-training of Specialised Disaster Response Forces.

National Disaster Management Authority (NDMA) has been advising all the states to train at least one battalion equivalent out of their state armed police units as Disaster Response Force on the lines of National Disaster Response Force (NDRF). The NDMA will help the states in training of State Disaster Response Force (SDRF) and other stakeholders. With this vision, NDMA proposes to set up four national level Disaster Response Institutes in the country aimed at training the disaster response personnel of NDRF, SDRF and other 'First Responders'. All the four training institutes will be equipped for training in all types of disasters.

To attain an effective and efficient Disaster Response System, the pressing need was identification of specific disaster response training courses and devising a unified, structured and uniform course module as well syllabus for these specific disaster response training courses. With this objective, the National Disaster Management Authority (NDMA) commissioned a systematic study to identify the training needs of personnel of National Disaster Response Force (NDRF), State Disaster Response Forces (SDRF) and other stakeholders. This report "Training Regime for Disaster Response" is a brilliant exertion towards attaining this objective that has materialized out of a detailed training needs analysis (TNA) and followed by extensive research on good practices in disaster response training within the country and elsewhere in the world.

The proposition behind a unified, structured, uniform course module and syllabus is that first the entire NDRF Bns will successfully attain these select courses and subsequently the SDRF Bns and other stakeholders will be trained on the same lines. The need of uniformly structured course module and syllabus emerged out of the fact that if all the NDRF Bns and other 'first responders' undergo the same training exercise, the coordination between different stakeholders would be expedient and well planned at the time of any major disaster where different NDRF Bns, SDRF Bns and other stakeholders will be working together in close

coordination with each other. The course module and syllabus is structured and devised level-wise i.e. orientation, basic and advance courses. It is also in accordance with the type of disasters, with appropriate emphasis on local vulnerability conditions.

The report on “Training Regime for Disaster Response” is the outcome of painstaking efforts on the part of the NDRF and CPFs personnel, as also several specialists and subject experts in related fields. This is definitely a major step towards the future where a holistic, uniformed and well structured disaster response training system will hold the key to an efficient and successful disaster response mechanism.

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PREFACE

Efficient and effective performance of any professional task is a direct function of training and constant retraining of personnel. Much more so, in respect of the tasks involving multiple and intricate skills. Of all the various components of disaster management cycle, it is 'response' which is the most crucial and most visible. Efficient and effective response to disasters demands mastery over a large variety of skills – physical, mental and behavioural – on the part of the responders. And, it is only through an efficacious regime of training and retraining that such mastery can be developed and sustained by them. This initiative of National Disaster Management Authority (NDMA) – to commission a systematic study of the training needs of the personnel of National Disaster Response Force (NDRF) and other 'first responders', and to elaborate a structured training regime for them on the basis of such study – is, thus, thoughtful as well as timely.

This report is the outcome of a detailed training needs analysis (TNA), followed by extensive research on good practices in disaster response training, in vogue within the country and elsewhere in the world. The process of TNA, *inter alia*, included several brainstorming sessions with a cross-section of officials of the various central police forces (CPFs) who have had direct experience of participation in disaster response operations, in the wake of tsunami, earthquakes in Bhuj and J&K, and major floods in different states, in the recent times. In the study of good practices, particular attention has been paid, in addition to good practices of our own country, to the models of countries which have devoted a lot of attention, energy and resources to improving their disaster response capabilities, in the recent decades. Guidelines issued by the UNDP and the other concerned international bodies, such as INSARAG (International Search and Rescue Advisory Group) have also been studied and appropriately incorporated in the course designs of the recommended training programmes.

It is earnestly hoped that the training regime so devised will help the process of capacity building of NDRF for efficient and effective discharge of its onerous

responsibility of saving precious lives, limbs and properties of victims of natural and man-made disasters, which we must pray to providence, in the first instance, would not befall us.

In concluding, I wish to place on record my sincere thanks to a large number of officers of NDRF and CPFs, as also several specialists and subject experts in the field of disaster response, without whose willing and valuable assistance, this task could not have been accomplished. It would be difficult to name every one individually but I must acknowledge the valuable assistance, suggestions and inputs received, in particular, from S/Shri Anurag Sharma, Director, NISA, CISF, Shishir Gupta and Vinay Kajla, Deputy Commandants, CISF, K.K. Tyagi, Inspector (Master Instructor), NISA, CISF, Alok Avasthy, Second-in-Command, CRPF, C.P. Saxena, Commandant, BSF, E. Ramesh, Commandant, ITBP, R.K. Sinha, Commandant / Staff Officer, NDMA, Dr. S.S. Patra, DIG (Medical), CRPF, Venkat Changavalli, CEO, Emergency Management & Research Institute (EMRI), Hyderabad, and Dr. G.V. Ramana Rao, Chief, Medical Training Division, EMRI. A special mention is also due to Shri Koshy Koshy, Director General, NDRF and an acknowledged expert in the field of training, for providing some very useful inputs. Much needed assistance – in the research work and also in typesetting the manuscript – was provided ever-willingly by Shri P. Venugopal, Junior Specialist.

My gratitude to Gen. N.C. Vij (Retd.), Vice Chairman, NDMA for giving me this opportunity and also for his invaluable guidance in different aspects of the work, from time to time. I have no words to express my gratefulness to Shri K.M. Singh, Member, NDMA whose infectious commitment and enthusiasm has been so very inspiring all through, in the accomplishment of this task. His keen and constant interest in the project, coupled with his profound domain knowledge, has added much value to the end product.

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PART - I

Training Regime for Disaster Response

1. Background

1.1. Disaster Management – Recent Initiatives of the Government of India

1.1.1. The high level of vulnerability of our country to different types of natural disasters[*], in addition to the ever-looming threat of industrial accidents and susceptibility to other man-made disasters including radiological, biological and chemical threats, renders efficient and effective disaster management a magnitudinal task. In view of this, the Government of India has, in the recent years, taken a series of significant, all round initiatives, *inter alia*, bringing about a paradigm shift in our overall approach to disaster management, from the hitherto relief-centric outlook to a holistic perspective. The new approach covers the entire cycle of disaster management encompassing prevention, mitigation, preparedness, response, relief and rehabilitation. A comprehensive Disaster Management Act, enacted in December 2005, now provides for institutional mechanisms for drawing up and monitoring the implementation of disaster management plans, to ensure timely and effective measures by various wings of the central and state governments for prevention of disasters, mitigating the effects of disasters and for undertaking prompt, holistic and coordinated response to any disaster situation. Besides providing for the setting up of Disaster Management Authorities at the national, state and district levels, the Act has also created a specialized National Disaster Response Force (NDRF) and a National Institute of Disaster Management (NIDM).

1.2. Disaster Response – a Critical Element of Disaster Management

1.2.1. The new, comprehensive approach to disaster management is, indeed, aimed at ensuring efficient and effective management of all the phases of disaster management cycle – from prevention to mitigation, to preparedness, to response, to

[*] About 60% of the landmass of the country is susceptible to earthquakes, over 40 million hectares prone to floods, nearly 8000 kilometres of coast line ever threatened by cyclones, and 68% of the country's geographical area susceptible to drought.

relief and rehabilitation. Nevertheless, 'response' being the most perceptible and most visible among all the elements of the disaster management cycle, the efficacy of the government's role in disaster management is going to be judged largely, most of the times, by the quality of 'response' and its effectiveness in minimizing the loss of lives and property of the affected people, when a calamity actually takes place. It is, therefore, appropriate that the government have decided to create NDRF as a specialized, multi-disciplinary and multi-skilled force – well equipped and well trained to effectively respond to the various types of disasters.

2. Training in Disaster Response

2.1. The key to efficiency in disaster response will lie in – more than equipment or anything else – the effectiveness of training and constant re-training of NDRF personnel. And, training in disaster response – as against training in other aspects of disaster management (prevention, mitigation, relief, rehabilitation, etc.) – has to be much more elaborate and multi-faceted. It has to be more skill-intensive and more operations-oriented, with larger proportions of 'demonstration' and 'hands-on' content than merely conceptual inputs covered through 'talk and chalk' method in classrooms. For this purpose, it would require a more extensive training infrastructure, including facilities like 'prop areas', 'rubble fields' and so on. A well-structured training regime, along with a world-class training infrastructure and state-of-the-art training arrangements, has, therefore, to be devised for the NDRF.

2.2. Further, efficient response to disasters will necessitate training of not only NDRF personnel but also several other target groups since notwithstanding the existence of NDRF, the response to any disaster would inevitably involve several other agencies and groups, such as state government personnel, members of civil defence organization as well as civil society volunteers.

2.3. Training of NDRF Personnel

2.3.1. Training of NDRF personnel, by itself, is going to be a mammoth task. The present sanctioned strength of NDRF is 8 Battalions – each comprising 1145 personnel, divided into 18 response teams of 45 personnel each. A 'Basic Course for

First Responders' (worked out to be of 12 weeks' duration) has, therefore, to be organized for as many as 6480 (45 x 18 x 8) personnel. Since NDRF is going to be an exclusively deputation-based force (which is necessary to ensure the age profile of personnel remaining at optimum level), the personnel would join it for a period of 5 years only. This would mean that, in the long run too, there would be a turnover of 20% of the force annually. So, some 1296 personnel, who would be joining the force anew every year, would have to undergo the 'Basic Course for First Responders' annually. The international standards of training of first responders demand each training course not to have more than 24 trainees (this is important, given the hands-on and practical-oriented nature of training). This will require some 54 training courses, of 12 weeks duration each, to be conducted every year for the basic training of first responders alone.

2.3.2. In addition, there will be several other training programmes to be organized, such as advanced courses – in a variety of skills and subjects – for the first responders, basic and specialised courses for para-medical and other technical personnel, equipment maintenance course, training of trainers' programmes, master trainers' courses et al.

2.4. **Training of State Government Personnel**

2.4.1. The basic responsibility of rescue, relief and rehabilitation measures in the event of a disaster is that of the state government concerned, the central government's role essentially being only to aid and assist the states in such situations. In the wake of a disaster, a large number of state government personnel – from the police, executive magistracy, medical, public health, public works department etc. wings – are not only involved in the activities of first response but also it is they who, due to geographical proximity, arrive at the disaster site much earlier than the central government agencies. The level of their efficiency too, in carrying out the task, is directly related to their training. Right now, arrangements for such training are non-existent in most of the states. Even after the necessary arrangements are put in place by all the states, the need for uniformity of standards and coordination of response between all the players (belonging to disparate wings of the state and central governments), will demand common arrangements for at

least training of trainers of the training institutions of the state governments. For the time being, even the training of first responders of the states will have to be catered for by NDMA.

2.5. **Training of other Target Groups**

2.5.1. Home Guards, civil defence volunteers, NGOs and civil society groups too play a significant role in disaster response. They not just supplement the effort of government agencies but, in most situations, they are the actual 'first responders' till the arrival of the later on the scene. Proper training in disaster response for them can have a multiplier effect on their efficiency in the performance of that role. Such training will also lead to better coordination of action and response between them and the government agencies when they have to work together. Arrangements are, therefore, necessary for their training too in disaster response, in a structured manner.

3**. Types of Training Courses to be organized**

3.1. The variegated nature of disasters to be dealt with would call for a wide variety of training inputs in disaster response, for the NDRF personnel as well as all other target groups. Floods, cyclones, earthquakes, landslides and avalanches, besides nuclear, chemical and biological emergencies, all call for mutually-different techniques of response, to effectively contain the potential of loss of life, limb and property from each of them. The need for specialized training for the specialized Battalions (such as NBC Battalions) apart, the first responders of all NDRF Battalions as also of the other categories would need to undergo an all-embracing training programme in the response strategies for different types of disasters. Para-medics and medical personnel, who have a very crucial role in disaster rescue operations, will also need to undergo a basic training course, tailored to their training needs in pre-hospital handling and treatment of victims.

3.2. Further, training in advanced techniques of disaster response for different types of natural calamities as well as man-made disasters, would need to be provided to at least a select few in each response team of every NDRF Battalion.

Advanced training in response methodologies for nuclear, biological and chemical emergencies would also be needed for a few personnel in the response teams of each NBC Battalion of NDRF. Also, a number of training of trainers' programmes, including master trainers' courses, would have to be organized for the instructors of the training institutions of NDRF as well as state government institutions.

3.3. Each Battalion of NDRF is going to have a canine squad with 36 dogs (2 per response team). Training will have to be organized for these dogs and their handlers in the techniques of search and rescue for different types of disaster situations.

3.4. Also, the NDRF Battalions are being equipped with a large variety of sophisticated and costly disaster response equipment. Courses in maintenance of equipment – including trouble shooting – will have to be organized for the personnel who are to be entrusted with the task of custody and maintenance of these equipment, to ensure their operation-worthiness all the time.

3.5. In addition to all these, senior and middle-level functionaries of NDRF as well as the states will have to be imparted training in strategic and supervisory aspects of disaster response, inter-agency coordination in disaster situations, familiarization with Incident Command System etc. Training in these aspects, to be really effective, will call for joint courses to be organized for all players in common courses.

3.6. Thus, the training regime for disaster response will have to take care of the following broad categories of courses:

(i) Basic course for first responders of all NDRF Battalions

(ii) Additional NBC Module for basic training of first responders of NBC Battalions of NDRF

(iii) Orientation course for first responders of state disaster response units of the states

(iv) Basic course for medical personnel & para-medics of NDRF Battalions & states

(v) Advanced courses in response methodologies for different disaster situations, namely, collapsed structure search & rescue (CSSR);

medical first response (MFR); flood, cyclone & water rescue; landslides, avalanches & mountain rescue; and response to nuclear, biological & chemical (NBC) emergencies

(vi) Training of trainers' courses (for regular and master trainers separately) in specialized response methodologies for different disaster situations, for the faculties of NDRF institutions

(vii) Training of trainers' course in disaster response in general, for the training institutions of state governments / central police forces / other concerned central government organisations

(viii) Training courses in search & rescue for dogs and dog handlers

(ix) Equipment Maintenance Course

(x) Joint Staff Courses for senior and middle-level officers of NDRF & States

(xi) Modules of day-to-day training for personnel of NDRF Battalions

4. **Training Courses – Broad Outlines**

4.1. **Basic Course for First Responders**

4.1.1. As mentioned above, the first responders of NDRF Battalions, irrespective of whatever specific specialization may have been assigned to their respective Battalions, will have to undergo a comprehensive curriculum of training, encompassing all aspects of disaster response for different types of situations. This is necessary since the physical proximity of a Battalion to a scene of disaster is going to be an important consideration for its immediate deployment in an emergency situation, irrespective of the nature of the calamity. For instance, a non-NBC Battalion may have to rush to a scene of a nuclear, biological or chemical emergency, for prompt response, pending the arrival of teams of an NBC Battalion. Even after the arrival of the specialized NBC teams, the teams of non-NBC Battalion may have to continue in the area, to supplement the work of the specialist teams. Floods and cyclones are so common all over the country that there might, often, be situations requiring the deployment of NDRF in several areas at a time. Teams of even NBC

Battalions will, thus, need to undergo thorough training in the diverse techniques of water rescue. Similarly, given the high vulnerability of different regions of the country to earthquakes, all NDRF Battalions will have to have the capability to deal with a disastrous earthquake situation anywhere in the country. So, the personnel of all NDRF Battalions have to be exposed to *at least the basics* of all aspects of disaster response. Indeed, the personnel of specialized Battalions (such as, NBC Battalions) will have to undergo additional training in the areas of the respective specializations of their Battalions, for which additional modules have to be incorporated in their basic training.

4.1.2. A common basic course for the first responders of all NDRF Battalions has been devised with this consideration in view. It includes inputs in collapsed structure search and rescue, rope rescue; flood, cyclone and water rescue; essentials of rescue strategies for NBC emergencies; basics of fire fighting and control; basics of medical first response; dignified management of dead bodies in disaster situations; in addition to adequate inputs in slithering, rock climbing, swimming etc. physical skills. Given the socio-psychological aspects of disaster response, necessary inputs in behavioural and empathy skills and personal development have also been included in the curriculum. The course duration for the basic training of NDRF personnel works out to 12 weeks, which is considered to be the minimum for any meaningful impact, in a skill-intensive training programme of this nature. The objectives of this training course, the block syllabus for 12 weeks and the details of module-wise syllabus are placed at pages 23 to 41 of Part-II of this report.

4.1.3. Insofar as the basic course for first responders of state disaster response forces is concerned, the curriculum has been condensed in the form of an orientation course of 4 weeks' duration. A training programme of duration longer than that is not even likely to be popular with either the prospective participants or their superior officers. Care has, however, been taken to include all the essential inputs in the programme. The objectives of this programme, the block syllabus and the details of module-wise syllabus may be seen at pages 42 to 50.

4.2. **Basic Course for Para-Medics & Medical Personnel**

4.2.1. As mentioned earlier, para-medics and medical personnel have to play a very important role in disaster response. In keeping with the importance of their role, the government has sanctioned 18 posts of Medical Officers and 36 para-medics in each NDRF Battalion. Since medical officers and para-medics, specially trained for disaster response functions, are not otherwise available, those inducted into NDRF Battalions will have to be imparted the necessary training tailored to their requirements. A training curriculum for them has, therefore, been worked out which, inter alia, includes modules on essentials of disaster response operations; basics of emergency medical response and disaster medicine; patient assessment – basics of human anatomy and physiology; pharmacology for disaster response; types of trauma – mechanisms of injury; fracture, head and spinal injuries; basic trauma life support (BTLS); medical management of nuclear, biological and chemical emergencies; cardiological and other common medical emergencies; patient immobilization and extrication; patient management; and setting up of an emergency hospital at disaster site. A module on behavioural skills and personal development has also been included in the syllabus. No training in medical subjects is complete without a due period of internship in a hospital. So, the syllabus includes two-week internship training in an appropriate hospital. The total duration of this course, thus, works out to 15 weeks (including internship). The objectives of the course, the block syllabus and the details of module-wise syllabus are placed at pages 91 – 107.

4.3. **Additional NBC Module for Basic Training of First Responders of NBC Battalions of NDRF**

4.3.1. The four NBC Battalions have been envisaged as the specialist arm of NDRF to deal with nuclear, biological and chemical emergencies. The personnel of these battalions have obviously to be trained more intensively in all aspects of such emergencies. A four-week additional module of training in NBC has, therefore, been devised for first responders of NBC Battalions of NDRF. The course lays due stress on the conceptual understanding of the phenomena of NBC disasters, as well as on demonstrations, practicals and mock drills in dealing with all the three types of emergencies. The total duration of basic training for the first responders of NBC

Battalions, including this module, will, thus become 16 weeks. The objectives of this additional module, its block syllabus and the details of module-wise syllabus are at pages 128 – 136.

4.4. **Advanced Courses in various disciplines**

4.4.1. As stated earlier, a few hand-picked personnel from each response team of every NDRF Battalion have to be imparted advanced training in different specialized areas of disaster response, such as, CSSR, MFR, NBC emergencies etc. Advanced courses have been designed for this purpose, with appropriate advanced training inputs in the respective disciplines. Each of these advanced courses will be of two weeks' duration. The objectives of these courses, the block syllabi and module-wise details of the syllabus in each case are placed at pages 71 – 78, 108 – 114, & 137 – 142, respectively.

4.5**. Training of Trainers' Courses**

4.5.1. The wide variety and large number of training programmes in disaster response, that need to be organized, would call for the availability of a good number of trainers in different disciplines of disaster response. Besides the requirement of instructors in the training establishments of NDRF, which will have the responsibility of conducting all the important training programmes for NDRF personnel as well as the training of trainers' programmes for the training institutions of state governments, adequate numbers of trained trainers would also be required in each NDRF Battalion. It may be noted here that the envisaged functions of these Battalions prominently include not only regular training activities for each Battalion's own personnel, in the form of refresher courses and day-to-day training, but also organizing the 4-week training for the state disaster response units in their respective areas. In addition, they will also be regularly conducting brief modules of training for home guards, civil defence personnel and civil society volunteers, besides awareness training for the community members in general.

4.5.2. In addition to the requirement of a large number of regular instructors for the NDRF's own training institutions as well as Battalions, the former would also require an appropriate number of 'master trainers' in different specializations. Thus, a

number of training of trainers' programmes of different types will have to be conducted on a regular basis, for NDRF's own requirements as well as that of the state-level institutions.

4.5.3. Training of trainers' courses will have to be organized broadly in three categories: (i) training of regular trainers in different disciplines for NDRF's own requirements, (ii) training of master trainers in different disciplines for NDRF training institutions, and (iii) training of trainers in disaster response in general, for the faculty of training institutions of state governments. As many as five different courses will, thus, be required for the training of direct trainers and an equal number of master trainers' courses, in each of the five disciplines (CSSR; MFR; flood, cyclone and water rescue; mountain rescue; and NBC emergencies). These courses will have to include, in addition to the direct trainer's skills pertaining to teaching and training methodologies, appropriate inputs relating to strategies of disaster response in the relevant disciplines, from a trainer's perspective. Each of these courses will be of a duration of two weeks.

4.5.4. The training of trainers' courses in disaster response for the faculty of training institutions of state governments / central police forces, on the other hand, would have to be of a longer duration of six weeks. This has to be so because in this course, the disaster response-related inputs have to be included in much larger quantum.

4.5.5. The objectives, the block syllabi and the details of module-wise syllabus of each of these courses may be seen in Part-II of the report.

4.6. Other Courses

In addition to the above, two more courses – one in the nature of a joint staff course for middle-level officers of the states and NDRF Battalions, and the other one in equipment maintenance – both of one week's duration each, have been devised, the details of which may be seen at pages 61– 66 and 67– 70 respectively, in Part-II of the report.

5. Desirable Training Infrastructure

5.1. Need for Multiple Training Institutions

5.1.1. The gamut of all this training activity is going to be so large – in terms of the variety of training programmes, the number of courses to be conducted and the number of personnel to be trained – that no single institution can handle the same without compromising on the efficiency and effectiveness of training. Hence the need for at least four or five state-of-the-art training institutions, preferably located in different geographical regions of the country.

5.2. Central Institutes of Disaster Response

5.2.1. The NDMA have, thus, appropriately, envisioned the creation of a network of training institutions dedicated to disaster response training. Four of these institutions are envisaged to be located at Latur, Hyderabad, Kolkata and Bhanu (Chandigarh), to be run for the present under the auspices of CRPF, CISF, BSF and ITBP respectively, till such time as the NDRF effectively takes off as a full-fledged force of its own. Under this scheme of things, the institution proposed to be created at Latur will be responsible for imparting the basic training to all first responders of the two NDRF Battalions of CRPF (with a training workload of 324 trainees per annum for this course alone); in addition to organizing the basic training course for para-medics and medical personnel of all NDRF Battalions and also the states; training of trainers' courses in disaster response for the state government personnel from the region of its geographical jurisdiction (broadly all the states and U.Ts in the western region of the country); Joint Staff Courses for middle-level officers of states and the NDRF; besides equipment maintenance course.

5.2.2. With the number of different training programmes envisaged and the optimal course capacity for each, the institution will have to run some 24 – 25 courses in a year, of a duration ranging between 1 – 12 weeks. At any given point of time, the institution would run 5 – 6 courses parallely.

5.2.3. The training institution at Hyderabad, proposed to be created within the precincts of the National Industrial Security Academy (NISA), will be responsible for

the basic training of first responders of the two NDRF Battalions of CISF. The proposed training institution at Kolkata will be responsible for the basic training of first responders belonging to the two NDRF Battalions of BSF, and the institution at Bhanu (Chandigarh) will conduct basic training programmes for the first responders of the two NDRF Battalions of ITBP.

5.2.4. All these institutions will also conduct training of trainers' programmes in disaster response for the states falling in the geographical regions respectively assigned to them, in addition to organizing joint staff courses for middle-level officers of states and NDRF, and equipment maintenance courses, besides periodically conducting brief training modules and mock exercises for the community volunteers and NGO personnel from the respective states. The workload of training in these three institutions will also be as heavy as in the case of Latur as mentioned above.

5.2.5. Given the important nature of their responsibilities and tasks, it would perhaps be appropriate to christen each of these four institutions as a **Central Institute of Disaster Response (CIDR).**

5.3. Need for a National-level Nodal Institution for Disaster Response Training

5.3.1. There will be several more important areas of training in disaster response still left out, besides the requirement of studies and research, for which we need to have appropriate arrangements, in an apex, national-level institution. These are :-

(i) advanced courses in different disciplines of disaster response (CSSR; MFR; NBC emergencies; cyclone, flood and water rescue etc.)

(ii) training of trainers' courses in CSSR; MFR; NBC emergencies; cyclone, flood and water rescue etc.

(iii) master trainers' courses in all the above-mentioned disciplines of disaster response;

(iv) Company-level and Battalion-level training for NDRF personnel (the CIDRs at Latur, Hyderabad, Kolkata and Bhanu will be able to conduct

only team-level training), and mock-exercises for them along with state government functionaries and civil society volunteers;

(v) strategic planning and management courses in disaster response, for senior officers of the central and state governments;

(vi) international commitments of training in disaster response; and

(vii) studies and research in disaster response techniques and technologies.

For this purpose, we need to create an exclusive national-level training institution.

5.3.2. It needs to be mentioned, in this regard, that the proposed central institutes (CIDRs) at Latur, Hyderabad, Kolkata and Bhanu (Chandigarh) would not be able to undertake these tasks since not only they would already have a heavy workload of training of their own, but also the infrastructure required for these training and research activities would be of a much more elaborate and specialized nature than what would be available in CIDRs.

5.3.3. The national-level training institution has to be centrally located. A place like Nagpur will be suitable for this purpose, not only because of its central location but also for the reason of the existence of the National Civil Defence College and the National Fire Service Training College there, with which the proposed institution could share some of the infrastructural and other resources. The institution, to be named as **National Institute of Disaster Response (NIDR)**, will also be a nodal point for research and R&D in disaster response.

5.3.4. A question may arise as to whether and why this responsibility cannot be entrusted to the already-existing National Institute of Disaster Management. On examination of this question, it is found that the NIDM has been created as the leading centre of excellence and premier national organization for training and research in holistic management of disasters. It has also to function as a ‘think-tank’ for the government for providing policy advice and facilitating capacity building resources including learning, research, training, system development and expertise promotion for effective disaster preparedness and mitigation. The charter of NIDM is, thus, very very broad. The training programmes being conducted by it cover a very

wide range of themes, such as “Flood Risk Mitigation and Management”, “Comprehensive Landslide Risk Management”, “Earthquake Risk Mitigation & Management”, “Drought Mitigation & Management”, “Mitigation & Management of Coastal Erosion”, “Disaster Psycho-Social Care”, “Gender Issues in Disaster Management”, “Building Codes & Designs”, “Climate Change & Disaster Management”, “Management of Risk to Cultural Property”, “Disaster Health Care & Management”, “Damage Assessment”, “Risk Financing & Risk Insurance”, “Formulation of District Disaster Management Plan”, etc.

5.3.5. This being the only national-level disaster management institution available in the country currently, and its charter being so very broad, it already has a heavy workload. Moreover, the infrastructure needed for training in disaster response is very very different (and elaborate) from that required for the courses being conducted by NIDM. In the interest of catering for specialized training in disaster response, with all the crucial position that it occupies in the disaster management cycle – it is, therefore, necessary to create a dedicated specialized national-level institution, which will be responsible for facilitating strategic learning, research, system development and expertise promotion for effective disaster response.

6. Training in Certain Specialised Skills – Need for Outsourcing

6.1. Despite creation of such an elaborate training infrastructure, there would still be certain small, though important, aspects of training left out, as diverse as the handling and use of heavy earth moving equipment (bull dozers, earth movers etc.), repair and maintenance of motor transport of all types used in disaster response operations, inventory management including management of containers, heli-slithering et al. Given the very specialized nature of training in such skills and the small quantum of training needs, it will not be cost-effective, or otherwise advisable, for the NDRF to create its own training infrastructure for these needs. It would be prudent to outsource all such training of NDRF personnel to outside specialized institutions. The content of training in all such fields will, indeed, have to be customized to meet the precise training needs of NDRF personnel in the respective fields. Arrangements will also have to be devised and put in place for a two-way

feedback on the assessment of each training programme and its impact evaluation, as also for regular, periodical review and revision of training content and methodology.

6.2. NDMA have, in a commendable initiative, already started organizing, on these lines, a training programme in heli-slithering for NDRF personnel recently, with the help of the Indian Air Force. Similarly, for the training of dogs and dog handlers for the search and rescue teams of NDRF Battalions, NDMA are in the process of tying up arrangements with the Remount Veterinary Corps (RVC) of the Indian Army. Under the proposed arrangement, to be covered by a memorandum of understanding between the NDMA and the RVC, all the dogs of the eight NDRF Battalions will be trained, along with all the dog handlers, by the RVC, in a phased manner. Further, arrangements have also been made with the Swiss Development Corporation for the advanced training of dog handlers, to be conducted at ITBP's Canine Training Centre at Bhanu (Chandigarh).

6.3. Similar models will need to be evolved for putting in place the appropriate training arrangements in the other requisite skills and trades, in collaboration with the concerned specialized agencies in public or even private sector.

7. Map for Action

7.1. Raising of Infrastructure

7.1.1. NDMA have already envisioned the creation of four central training institutions, in addition to an apex national-level institute, for disaster response. In fact, for the CIDR at Latur, a detailed proposal for the administrative approval and financial sanction for creation of infrastructure, sanction of manpower and procurement of training equipment and training aids etc., has also been submitted recently, and it is under active consideration of the government. All the training activities envisaged for Latur institution in this report, have been kept in view in formulating the proposal. A similar proposal for the creation of all the requisite facilities for the institution to be started within the precincts of NISA, Hyderabad has also been submitted to the

government and is understood to be under processing. In this connection, it needs to be mentioned that NISA campus suffers from constraints of space and it may not be feasible to raise the entire infrastructure of a Central Institute of Disaster Response in its precincts unless we acquire some additional land in the vicinity. The proposal of CISF in this regard would need to be approved on priority.

7.1.2. Now that all the training activities have been identified in detail for the remaining two CIDRs (with proposed locations at Kolkata and Bhanu, or some other alternative places in the respective geographical regions, depending on the availability of land and other relevant considerations), proposals for raising these two institutions may also be got formulated and submitted to the government, at the earliest. Training, to be meaningful, will require all the needed infrastructure and other resources, and sooner we provide for the same, the better.

7.1.3. NDMA may also finalise the charter of functions and the location (preferably Nagpur) of the nodal, apex-level institution (National Institute of Disaster Response) at the earliest and have the necessary proposal formulated for the creation of infrastructure and other resources for the same.

7.2. Starting the training activity

7.2.1. The sanction of the proposals and consequent raising of infrastructure will easily take a couple of years, if not more. Meanwhile, given the importance of training in ensuring efficient and effective response to disasters, it would not be prudent to wait for the training activity to start in right earnest, till such time as proper infrastructure is developed. Indeed, some amount of training activity for NDRF has already been going on, in an ad hoc manner, for the past one year or so, in some of the existing training establishments of the four central police forces (namely, BSF, CRPF, CISF and ITBP), the units of which now constitute the NDRF. Thus, some courses of training in disaster response are being conducted at the BSF Academy at Tekanpur, the Coimbatore CTC of the CRPF, NISA of CISF at Hyderabad, and in a make-shift training set-up of ITBP at Bhanu. Though it is laudable on the part of the four central police forces to have started the training activity in disaster response within the available resources, the current training activity is hardly adequate, either

in content or quality. Even the durations of the courses being conducted are too brief. Now that a full-fledged training regime for disaster response has been devised on the basis of a systematic training needs analysis and training courses have been designed with optimal content, it will be prudent to start grounding at least some of these courses (as recommended in this report) in these very training institutions (Tekanpur, NISA Hyderabad, Coimbatore and Bhanu), without waiting for the readying of infrastructure of the proposed new institutions.

7.2.2. The following courses can be started by the existing CPF institutions at Tekanpur, Coimbatore, Hyderabad and Bhanu, for the personnel of at least the NDRF Battalions of their respective forces:-

(1) Basic Training Course for first responders of NDRF Battatlions (12 weeks)

(2) Additional NBC Module for Basic Training of first responders of NBC Battalions (4 weeks)

(3) Equipment Maintenance Course (1 week)

(4) Joint Staff Course in Disaster Response for middle-level officers of states and NDRF (1 week)

(5) Training of Trainers' Course in Disaster Response for the faculty of training institutions of state governments (6 weeks)

7.2.3. NISA, Hyderabad – because they have some of the requisite infrastructure and facilities – can, in addition, take up the following further courses for not only the CISF component of NDRF but for the others as well:

(1) Training of Trainers' Courses in NBC (2 weeks)

(2) Training of Trainers Courses in CSSR (2 weeks)

7.2.4. It is also important to start grounding the 4-week orientation course for first responders of state disaster response forces, at the earliest. In fact, NDMA have already been receiving constant requests from several states in this regard. This course, on account of the large quantum of its requirement, has been proposed to be conducted by NDRF Battalions, in addition to the training institutions of NDRF. All the eight Battalions can, straightway, start conducting this course for the personnel of

states falling in their assigned geographical areas. This training activity will also help NDRF Battalions in promoting their own liaison and contact with the functionaries and units concerned with disaster response in the states.

7.2.5. NDRF Battalions may also start conducting structured mock exercises involving state government personnel, civil defence and civil society volunteers, as a regular training activity. Capsule programmes for promoting community awareness on disaster response among members of the public, already being conducted by most of the Battalions, may be standardized in their format and content.

7.3. Provision of trained trainers, additional equipment, training aids and other resources for the existing institutions of CPFs and to NDRF Bns.

7.3.1. To enable the existing four training establishments of the central police forces to conduct the above training activity efficiently and effectively, their resources, in terms of trained trainers, training equipment (including disaster response equipment), training aids etc., will have to be augmented. Insofar as trained trainers are concerned, each of the four CPFs has nine training faculty posts in disaster response (Associate Professors / Commandants – 3, Deputy Commandants – 3, Inspector – 3) already sanctioned, vide MHA Notification No.1/15/2002-DM.1/NDMA.III (A) dated 19th January, 2006. These posts may be made functional by inducting against them, suitable and trained trainers in NBC and other disciplines, in the existing institutions. The posts may be transferred eventually to the proposed CIDRs, as and when those come up. Further, a large number of officers of all four CPFs have already undergone various advanced training courses – even training of trainers' programmes – in certain specialized institutions within the country (such as DRDE, Gwalior, CME, Pune etc.) as also Master Instructors' Courses in Search and Rescue etc. in the USA and other countries abroad. Many of them are now posted in non-training assignments outside NDRF. Such officers need to be identified and posted to these four training establishments, and to NDRF Battalions, to augment their training faculty. That will also ensure that the training received by them is put to good use for training others.

7.3.2. In addition, at least one ‘response team’ of a NDRF Battalion may be attached, by rotation, to each of the four training establishments of CPFs, to help the training faculty there in conducting the demonstrations and hands-on content of training. This will not only enhance the effectiveness of training in the courses conducted by these institutions, but also provide a kind of refresher training for the members of the teams concerned themselves.

7.3.3. As for the disaster response and other training equipment, NDMA may supply the same to these institutions, after due identification of their exact needs, on loan basis. The equipment can be transferred later to the regular NDRF training institutions once those come up and take over all the training activities from the existing institutions of central police forces.

7.3.4. Similarly, all the necessary training equipment and training aids will have to be provided to the various NDRF Battalions. Since training is going to be a regular activity in these Battalions, NDMA may supply all the equipment, aids and tools needed for training, to them on a permanent basis, by revising, if necessary, their permanent authorizations.

8. To Sum up

8.1. Efficiency and effectiveness of NDRF personnel and other players in disaster response is a direct function of efficient and effective training. It is, therefore, important to put in place the training regime recommended in this report, at the very soonest. This could, indeed, be done in a phased, though time-bound, manner.

PART - II

TRAINING COURSES IN DISASTER RESPONSE

Sl. No.	Courses	Duration	Level of participants	Training Locale	Remarks
1.	Basic Training Course for first responders of NDRF Battalions	12 Weeks	All members of response teams & all supervisory officers of NDRF	All the four proposed regional institutions of NDRF*	May be organized, meanwhile, in the existing CPF institutions**
2.	Basic Training for para-medics & medical personnel of NDRF Battalions & States	15 Weeks	All para-medics and medical personnel of NDRF	CIDR, Latur	..
3.	Additional NBC Module for Basic Training of first responders of NBC Battalions of NDRF	4 Weeks	All members of response teams & all supervisory officers of NBC Bns. of NDRF	CIDR, Hyderabad	May be organized, meanwhile, in the existing CPF institutions
4.	Orientation Course for first responders of State Disaster Response Forces (SDRFs)	4 Weeks	Personnel nominated by state governments	All NDRF Battalions	..
5.	Training of Trainers' Course in Disaster Response for faculty members of training institutions of state governments / central police forces (CPFs) & other central government organisations	6 Weeks	Faculty members nominated by state governments / CPFs / other central organisations	All the four proposed regional institutions (CIDRs) of NDRF	May be organized, meanwhile, in the existing CPF institutions
6.	Joint Staff Course in Disaster Response for middle-level officers of states and NDRF Bns.	1 Week	Middle-level officers of state governments & NDRF	- do -	- do -

* With their nomenclature recommended as 'Central Institutes of Disaster Response' (CIDRs)

** Located at Coimbatore (CRPF), Tekanpur (BSF), Hyderabad (CISF), and Bhanu (ITBP)

Sl. No.	Courses	Duration	Level of participants	Training Locale	Remarks
7.	Equipment Maintenance Course	1 Week	NDRF officials responsible for custody and maintenance of equipment in Battalions training institutions etc.	All the four proposed regional institutions (CIDRs) of NDRF	May be organized, meanwhile, in the existing CPF institutions
8.	Advanced Course in collapsed structure search & rescue (CSSR)	2 Weeks	Select NDRF personnel, possessing QRs specified at page 71	National Institute of Disaster Response (NIDR), Nagpur	..
9.	Training of Trainers' Course in collapsed structure search & rescue (CSSR)	2 Weeks	Select NDRF personnel, possessing QRs specified at page 79	NIDR, Nagpur	May be organized, in the meanwhile, in NISA Hyderabad
10.	Master Trainers' Course in collapsed structure search & rescue (CSSR)	2 Weeks	Select NDRF personnel, possessing QRs specified at page 85	NIDR, Nagpur	..
11.	Advanced Course in Medical First Response (MFR)	15 Working days	Select NDRF personnel, possessing QRs specified at page 108	NIDR, Nagpur	..
12.	Training of Trainers' Course in Medical First Response (MFR)	12 Working days	Select NDRF personnel, possessing QRs specified at page 115	NIDR, Nagpur	..
13.	Master Trainers' Course in Medical First Response (MFR)	2 Weeks	Select NDRF personnel, possessing QRs specified at page 122	NIDR, Nagpur	..
14.	Advanced Course in the Response to Nuclear, Biological & Chemical (NBC) Emergencies	2 Weeks	Select NDRF personnel, possessing QRs specified at page 137	NIDR Nagpur	..

Sl. No.	Courses	Duration	Level of participants	Training Locale	Remarks
15.	Training of Trainers' Course in the Response to Nuclear, Biological & Chemical (NBC) Emergencies	2 Weeks	Select NDRF personnel, possessing QRs specified at page 143	NIDR, Nagpur	May be organized, in the meanwhile, in NISA Hyderabad
16.	Master Trainers' Course in the Response to Nuclear, Biological & Chemical (NBC) Emergencies	2 Weeks	Select NDRF personnel, possessing QRs specified at page 149	NIDR, Nagpur	..

BASIC TRAINING COURSE FOR FIRST RESPONDERS OF NDRF BATTALIONS

(12 Weeks)

LEVEL OF PARTICIPANTS

All members of the emergency response teams (irrespective of ranks) and all supervisory officers, of NDRF Battalions.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- have a good idea about the various types of disasters and to understand the basic principles of disaster response in different situations;
- understand the concepts, methodology and techniques of search and rescue operations in different disaster situations, including collapsed structure search and rescue operations, urban search and rescue operations and rope rescue operations, as also become familiar with the various equipment and tools used for the same;
- learn the various methods and techniques of evacuating casualties;
- become familiar with the essentials of fire fighting and control;
- acquire the basic swimming skills and the requisite life saving skills needed for water and flood rescue operations;
- understand the causes of, and the nature of threats caused by, nuclear, biological and chemical disasters, as also the basic principles of management of the NBC emergencies;
- gain familiarity with the emergency medical services system, the various kinds of medical emergencies encountered in disaster situations, as also the principles of triage and basic life support systems so as to be able to assist para-medics in organizing and conducting pre-hospital treatment;
- become familiar with the basics of communication, including radio telephony procedures, satellite phones, Internet and Ham Radio, used in disaster situations;
- understand the importance and methods of dignified management of dead bodies; and
- imbibe behavioural, team and empathy skills, useful for first responders in disaster situations, as also learn the basics of stress and health management;

The **emphasis** of this course will be on the specific **skills necessary for the first responders in disaster situations.**

COURSE DURATION

1. Duration of the Course	..	12 weeks (84 days)
2. Sundays (11), Second Saturdays (3), Holidays (3)	..	17
3. No. of working days available (84 -17)	..	67
4. Full working days	..	58
5. Half working days (Saturdays)	..	9
6. No. of periods in a working day	..	10
7. No. of periods in a half-working day	..	6
6. No. of periods available	..	634

SUGGESTED DAILY SCHEDULE

0600 – 0645 hrs.	.. P.T. / Yoga / Swimming
0815 - 0855 hrs.	.. I Period
0855 – 0935 hrs	.. II Period
0935 – 1015 hrs.	.. III Period
1015 – 1045 hrs.	.. Tea Break
1045 – 1125 hrs.	.. IV Period
1125 – 1205 hrs.	.. V Period
1205 – 1245 hrs.	.. VI Period
1245 – 1415 hrs.	.. Lunch Break
1415 – 1455hrs.	.. VII Period
1455 – 1535 hrs.	.. VIII Period
1535 – 1550 hrs.	.. Tea Break
1550 – 1630 hrs.	.. IX Period
1630 – 1710 hrs.	… X Period
1730 – 1830 hrs.	.. Games

Block Syllabus

Module	Subject	Periods to be assigned			
		Theory	Demo*	Pract.	Total
	Course Introduction; Inauguration; A Brief Overview of Major Disasters	04	..	..	04
A	Collapsed Structure Search & Rescue	41	16	95	152
B	Essentials of Fire Fighting & Control	07	05	..	12
C	Rope Rescue	18	13	45	76
D	Water and Flood Rescue	05 (02) 1	02 (02) 2	(24) 1 (30) 2 (06) 3	7
E	Basics of Medical First Response	44	14	64	122
F	Weapons of Mass Destruction & NBC Emergencies (i) Radiological Emergency	25	17	18	60
	(ii) Biological Emergency	18	..	04	22
	(iii) Chemical Emergency	22	09	09	40
	Revision of NBC Inputs and Tests	07	..	..	07
G	Dignified Management of Dead Bodies	04	04	..	08

* Including through CDs, Video films etc., where available

1. To be conducted at the Swimming Pool / Water Body during PT / Yoga session in mornings.

2. To be conducted in the evenings during the Games period

3. To be conducted during night hours

Module	Subject	Periods to be assigned			
		Theory	**Demo***	**Pract.**	**Total**
H	Communication during Emergencies	06	04	10	20
I	Behavioural Skills and Personal Development	20	..	..	20
J	Rock Climbing	..	..	36 **4**	36
K	Slithering	..	..	24 **4**	24
	Course Feedback & Valediction	04	..	..	04
	Total	**225**	**84**	**305**	**614**
	Field visits & Spare periods				20
	Grand Total				**634**

* Including through CDs, Video films etc., where available

4. To be conducted, as a module each, in the first three periods in the forenoon session

(12 Weeks)

Detailed Syllabus

Subjects	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Introduction – Objectives of the Course, Methodology etc.; Inauguration; A Brief overview of Major Disasters	04	..	..	04

A. COLLAPSED STRUCTURE SEARCH & RESCUE (CSSR)

Organizing a CSSR Operation Definition of CSSR; Terminology; Overview of the Incident Command System; Area of operations; Phases of a CSSR Team Mission; Stages during the operation; Phases of a CSSR Operation; Steps for initial assessment; Basic organization of a CSSR Team.	03	..	..	03
Structures, Materials and Damage Types Construction materials; Classification according to composition and use; Forces affecting building materials; Construction methods; Characteristics of structures; Types of damage and failures; Collapse patterns.	04	..	..	04
Structural Triage and the INSARAG Marking System Structural Triage; Triage factors and criteria; INSARAG (International Search and Rescue Advisory Group) Marking System and Guidelines.	03	..	..	03
Operational Safety Factors affecting safety; Operational guidelines; Unsafe actions and conditions; Safety rules; Safety considerations for each phase of a CSSR Mission.	02	..	..	02
Search and Location Techniques, Confined Space Rescue Operations Definition of Void Space; Locating void spaces; Types of structures; Collapse patterns; Stages for search and location - Reconnaissance, Gain access, Location; Conventional search techniques; Unconventional search techniques; Types of confined spaces; Hazards of confined spaces.	02	02	09	13

* Including through CDs, Video films etc., where available

	Periods to be assigned

Subjects	Theory	Demo*	Pract.	Total
Equipment, Tools and Accessories. Introduction of various equipment, tools and accessories; Classification according to use; Classification according to operation; Steps to follow before, during and after use; Use of Chipping Hammer; Use of Impact Drill; Use of Saws.	02	02	09	13
Rescue Strategies and Techniques Vertical and Horizontal Approach – Advantages and disadvantages; Rescue techniques; Steps for assessment of access areas; Techniques for breaking and breaching	02	02	07	11
Shoring Techniques Definitions of Shoring; Types of shoring; Conditions for shoring; Procedure for building shores.	02	02	07	11
Lifting and Stabilizing Loads Lifting Techniques; Use of Hydraulic Jack; Cribbing.	02	01	05	08
Exercise Organizing and starting a CSSR operation, Searching for and locating victims, Gaining access to a victim; Extricating the victim; Providing pre-hospital treatment.	..	..	09	09
Principles of USAR (Urban Search and Rescue) Operations Principles of USAR Operations.	02	..	..	02
Breathing Apparatus (BA) Training Parts of a BA set; BA donning procedures; BA confidence training	01	01	07	09
Breathing Apparatus – Search Procedures in Confined Space Techniques and procedures of search.	01	..	08	09
Height Rescue Techniques Fundamentals of high angle rescue; Introduction to pulley systems; Execution of techniques learnt; Field Exercise.	01	01	05	07

* Including through CDs, Video films etc., where available

Subjects	Periods to be assigned			
	Theory	Demo*	Pract.	Total

Lifting and Towing Rescue Equipment Use of various lifting and towing equipment.	01	01	05	07
Life Detecting Devices Use of various life detecting devices.	01	01	05	07
Methods of Evacuating Casualty without Equipment Different ways of evacuating a casualty without equipment; Ground rescue, viz., Rescue on hand and knees: Drag out rescue, Two hand seat method, Four hand seat method, S method, Firemen lift method, Piggy back carry method, Reverse piggy back carry method, Human crutch method, Cradle method, Human crawl method, Toe drag method; Fore and aft method.	01	01	04	06
Rescue Nets and DART Rapellers Rescue Procedures; Tactics and techniques of rescue using rescue net and dart rapellers; Execution of techniques learnt.	01	..	02	03
Debris Tunneling Techniques of debris tunneling.	02	02	05	09
Exercise – Adversity Rescue in a Collapsed Building	01	..	08	09
Revision	05	..	..	05
Tests	02	..	..	02
Total	**41**	**16**	**95**	**152**

B. ESSENTIALS OF FIRE FIGHTING & CONTROL

Introduction: Classification of fires, Chemistry of fire, Causes & principles of extinction	02	..	..	02
Action in case of fire: Fire-fighting methods	01	01	..	02

* Including through CDs, Video films etc., where available

Subjects	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**

Fire fighting equipment	01	01	..	02
Sprinkler system, Drenchers, Risers, Hose-reel, Hydrants and other fire extinguishers	01	03	..	04
Salvage: Rescue of casualties and resuscitation	02	..	..	02
Total	**07**	**05**	**..**	**12**

C. ROPE RESCUE

Rescue Operations & Safety Management: Theoretical Aspects Characteristics of rescue operations; Judgment of situation; Decision and command; Systematic activity; Rule observance; Basic principles of safety control; Ten rules for securing safety; Care and maintenance of rope and other rescue equipment.	02	..	..	02
Emergency Techniques (from higher level) Rescue from high places, viz., emergency ladder rescue, horizontal rescue using ladder, horizontal rescue from single suspension point, seated rappel back carry rescue, sliding stretcher method, single flying fox method, double flying fox method, rescue using pulleys.	02	04	09	15
Emergency Techniques (from lower level) Rescue from low places, viz., block & tackle lift rescue, ladder crane rescue, rescue from underground vessel/tank.	01	01	07	09
Basic Action for Rescue Operations Search efforts; Searching in fires in wooden structures; Searching in fires in structures of fire resistant construction; Searching in fire in mid-rise and high-rise buildings; Searching in fires in underground facilities; Searching in special fire situations; Evacuation guidance.	03	02	07	12
Water Rescue Techniques Using Ropes Rescuing a drowning person; Non-swimming methods of rescue using ropes.	01	02	02	05

* Including through CDs, Video films etc., where available

Subjects	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**

Climbing, Crossing and Descending Techniques & Equipment Setting the ropes; Knots and hitches; Securing; Climbing procedure, viz., purezic climbing, using hand & foot lock; Descending procedure, viz., shoulder catching, neck catching, cross catching, sitting suspension; Method of taking working posture; Over hand descending; Rope crossing procedures, viz., Monkey crossing, sailor crossing and try lean crossing; River rescue techniques.	02	02	12	16
Heat & Smoke Tolerance Training Exposure of trainees to heat and smoky environment; Search in such environment.	01	..	02	03
Entry Techniques Entry using ladder; Entry utilizing other facilities; Entering form adjacent building; Special entering; Ladder hanging and extending; Procedure of entering a tank and an underground tank; Procedure for entering into tunnel along side drain.	01	02	06	09
Revision	03	..	..	03
Tests	02	..	..	02
Total	**18**	**13**	**45**	**76**

D. WATER AND FLOOD RESCUE

Introduction Significance of water rescue training; Safe water practices; Survival in water; Self-preservation; Recognizing an emergency; Assessment before and during a rescue; Priorities for rescue; Use of bystanders	(02) **1**	-	-	-

1.To be conducted at the Swimming Pool / Water Body during PT / Yoga session in mornings.

* Including through CDs, Video films etc., where available

Subjects	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**

Swimming Skills Four styles of swimming – head up free style, back stroke without use of arm (chin carry position), head up breast stroke, side stroke using one arm; Endurance swimming; Under-water swimming; Night swimming.	..	..	(24) 1 (6) 2	..
Life Saving Skills Quick undressing in water / out of water; Face immersion without any support in natural water; Standing in water without the help of hands; Leg first dive; Surface dive – Peacock position and recovering objects; Approaching a drowning person and carrying techniques; Lifting and landing from water to land, from water to boat, shifting the casualty to stretcher and carry; High board jump with life jacket/PFD; Life saving in floating water / types of current and types of waves; Practicals with wave simulator.	..	..	(20) **3**	..
Knowledge of Terrain & Flood Knowledge of terrains, weather conditions, camping ground, knowledge of high and low ground, video films on tropical flood situations.	02	02	..	04
Equipment Handling Lifeboat – handling, carrying, embarking and disembarking; Rowing boat – Stagnant water, flowing water; Outboard engine; Life jackets and life belts, knowing the equipments.	..	(01) 3	(04) **3**	..
Underwater Physiology & First Aid	02	..	..	02
Diving Emergencies Types of emergencies; Management of diving emergencies; Emergency diving equipment, Emergency procedure, Safe-diving operational procedure.	01	(01) **3**	(06) **3**	01
Total	**05** **(2) 1**	**02** **(2) 3**	**(24) 1** **(06)** 2 **(30) 3**	**07**

1. To be conducted at the Swimming Pool / Water Body during PT / Yoga session in the mornings.

2. To be conducted during night hours.

3. To be conducted in the evenings during the Games period.

* Including through CDs, Video films etc., where available

E. BASICS OF MEDICAL FIRST RESPPONSE

Subjects	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

Subjects	Periods to be assigned			
	Theory	Demo*	Pract.	Total
The Emergency Medical Services (EMS) System and the Medical First Responder Components of the EMS System; Pre-hospital treatment; Duties of MFR; Qualities of MFR; Legal issues.	03	..	..	03
Medical Terminology	02	..	..	02
Infectious Disease Precautions Modes of transmission, signs and symptoms; Pre-hospital treatment; Universal precautions.	02	..	..	02
The Scene of Incident Incident; Request for assistance; Approaching the scene; Types of incidents; Scene assessment; Scene safety; Gaining access; Personal protection equipment; Medical equipment.	02	..	..	02
Anatomical References Anatomical position; Reference points; Divisions, body cavities.	02	01	..	03
Initial Assessment and Physical Exam Six phases of patient assessment plan.	02	02	04	08
Basic Life Support and Cardio-Pulmonary Resuscitation (BLS and CPR) The respiratory system; Techniques for opening the airway; Rescue breathing; Obstructed airway; Steps for clearing or opening an airway; Anatomy of the circulatory system; Steps for CPR; Complications of inadequate CPR; Initiating and terminating CPR.	02	02	09	13
Oxygen Therapy Indications; Equipment and accessories; CPR mask; Bag-valve mask; Oxygen equipment; Procedures.	02	..	03	05
Haemorrhage and Shock Broad overview of the circulatory system; Pulse locations; Blood and blood volume; Perfusion; Shock; Anaphylactic shock; Internal and external haemorrhage	01	01	02	04

* Including through CDs, Video films etc., where available

	Periods to be assigned

Subjects	Theory	Demo*	Pract.	Total
Mechanisms of Injury Mechanisms of injury; Potential injuries; Crush syndrome; Compartment syndrome; Immobilization	01	..	02	03
Soft Tissue Injuries Dressing and bandages; Open and closed injuries; Pre-hospital treatment.	01	01	03	05
Musculo-Skeletal Injuries Skeletal system; Fractures; Sprains and strains; Reasons for immobilizing; Techniques for immobilization; Manual traction	02	01	05	08
Injuries to the Skull, Spine and Chest Specific injuries; Pre-hospital treatment.	01	01	03	05
Burns and Environmental Emergencies Types of burns; Classification; Rule of nine; Pre-hospital care in case of thermal, chemical or electrical burns; Environmental emergencies like heat and cold emergencies.	02	01	..	03
Poisoning Ingested poisons; Absorbed poisons; Injected poisons; Alcohol abuse, Drug abuse, Pre-hospital treatment.	02	01	..	03
Medical Emergencies: Cardio-Vascular Emergencies and CVA Myocardial infarction; Angina pectoris; Congestive heart failure; Cerebral-vascular accident and hypertension; Signs and symptoms and Pre-hospital treatment.	02	..	..	02
Respiratory Emergencies Common causes of respiratory problems; Smoke inhalation; Pre-hospital treatment.	02	..	..	02
Medical Emergencies: Seizures, Diabetic and Abdominal Emergencies Signs and symptoms; Pre-hospital treatment.	02	..	..	02

*Including through CDs, Video films etc., where available

Subjects	Periods to be assigned			
	Theory	Demo*	Pract.	Total

Childbirth Emergencies Anatomy; Stages of childbirth; Assessment of the mother; Pre-hospital treatment of the mother and newborn; Complications.	02	02	..	04
Lifting and Moving Patients Methods for correct lifting; Correct posture; Handling neck and spinal injuries	02	01	04	07
Report Writing and Preparing for the Next Call Report format; Equipment decontamination; Personal decontamination.	02	..	..	02
Triage Color coding, review of diagnostic signs.	02	..	02	04
Two group presentations	..	..	09	09
Practical Exercises (including evaluation) Three Scenarios: Trauma, Medical emergencies, and Childbirth	..	..	18	18
Revision	03	..	..	03
Total	**44**	**14**	**64**	**122**

F. WEAPONS OF MASS DESTRUCTION – NBC EMERGENCIES

(i) RADIOLOGICAL EMERGENCY

Phenomenon of Nuclear Explosion	02	..	..	02
Types of Burst and their characteristics; Effects of Nuclear Explosion	02	..	..	02
Measurement units for calculation of Radiation Doses Dosimetric Quantities;	02	..	..	02
Practical aspects of Meteorology in NBC scenario: Effects of weather and terrain	01	01	..	02

*Including through CDs, Video films etc., where available

Subjects	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**

Effects of time, distance and shielding on exposure	01	01	..	02
Demonstration – different types of radiation	..	02	..	02
Different types of detection and monitoring equipment	..	02	..	02
Practicals on use of GM Survey Meter and Alpha Contamination Monitors	..	..	02	02
Biological effects of radiation – Video film	..	02	..	02
Concepts of personal monitoring, use of DRD, TLD and Electronic Dosimeters; Use of Teletector Dosimeters; Practicals on Dose measurement using TLD, DRD and Electronic Dosimeter; Practicals on use of Beta and Gamma Contamination Monitors; Mobile radiation monitoring equipment.	02	02	02	06
Survivability of communications in nuclear environment	01	..	..	01
Reccee, monitoring and survey	01	..	02	03
Various sources of radiation and their applications and handling	01	02	..	03
Transportation of radioactive material; Managing radiological transport accidents;	01	..	..	01
Radiological dispersal devices (RDD); Emergency response for RDD, including marking of contaminated area;	01	..	01	02
Effects of Nuclear Weapons on Hiroshima & Nagasaki (including screening of a film)	01	01	..	02
Other case studies of radiological disasters, including vehicular accidents carrying radioactive material	02	..	..	02
Response / Emergency management, including decontamination and mitigation	02	..	..	02

*Including through CDs, Video films etc., where available

Subjects	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**

Various items of Personal Protective Equipment (PPE)	01	02	..	03
Medical management of radiological emergencies	02	..	..	02
Exposure guidelines for first responders	01	..	..	01
Survival Drills	..	02	..	02
Principles of radio-active waste management	01	..	..	01
On-site Controller Response: Mock drills with active participation of trainees on: (a) Search of orphan radioactive source (b) Establishment of decontamination station and decontamination of vehicles, personnel & equipment (c) Use of PPE		. .. .	 02 02 02	 02 02 02
Outdoor (simulation) exercise – on radiological dispersal devices (RDDs); Debriefing after exercise	..	..	05	05
Total	**25**	**17**	**18**	**60**

(ii) BIOLOGICAL EMERGENCY

History and overview of Biological Warfare Agents (BWAs)	02	..	..	02
Bacteria, Virus and Toxins as BWAs	01	..	..	01
Distinguishing between normal epidemics and those caused by BWAs	02	..	..	02
Signs and symptoms of diseases caused by BWAs	02	..	..	02
Signs and symptoms of BWA Toxins	01	..	..	01
Treatment of diseases caused by BWAs	02	..	..	02

*Including through CDs, Video films etc., where available

Subjects	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**

Mode of transmission of BWAs	01	..	..	01
Detection of BWAs	01	..	..	01
Practical detection methods (Kit-based)	..	..	02	02
Medical protection methods	02	..	..	02
Physical methods of protection	01	..	..	01
Protection – Quarantine	01	..	..	01
Decontamination	01	..	..	01
Practicals on Decontamination (Physical Protection Kit)	..	..	02	02
Standard Operating Procedures for Biological Emergencies	01	..	..	01
Total	**18**	**..**	**04**	**22**

(iii) CHEMICAL EMERGENCY

Introduction to Chemical Warfare Agents (CWAs)	01	..	..	01
Definition of CWA and history of CWAs	01	..	..	01
Threat perception of CWA; Classification and characteristics of CWAs; Physical and Chemical properties of CWAs	03	..	..	03
Nerve agents, Blister agents, Choking agents and Blood agents; their signs and symptoms	04	..	..	04
Detection: Part-1 (Chemical based)	01	02	..	03
Detection: Part-2 (Instrument based)	01	02	..	03
Practicals on detection of nerve agents – three colour detector papers, detector tubes and other means	..	..	03	03

*Including through CDs, Video films etc., where available

Subjects	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**

Subjects	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Physical protection against CWAs	01	..	..	01
Decontamination: Part-1 (Principles and procedures)	02	..	..	02
Practical on use of Personal Protection Equipment (PPE)	..	..	02	02
Decontamination: Part-2 (Contamination avoidance and triage)	01	..	..	01
Personal Decontamination Kits – PDK1, PDK2, DS2	01	01	..	02
Means of delivery of CWAs and their dispersal	01	..	..	01
Management of chemical emergencies	01	02	..	03
Standard Operating Procedures for Chemical Emergencies	02	..	..	02
Mock Drill (Detection, Triage and decontamination)	..	02	04	06
De-briefing Session	02	..	..	02
Total	**22**	**09**	**09**	**40**
Revision of NBC Inputs	05	..	..	05
Tests	02	..	..	02
Grand Total – NBC Inputs	**72**	**26**	**31**	**129**

G. DIGNIFIED MANAGEMENT OF DEAD BODIES

Body Recovery: Need for rapid retrieval; Methods and procedures of recovering dead bodies; Personal belongings of the dead; Health and safety precautions Identification of Dead bodies: Need for maximizing identification; Methods of identification – Matching the deceased with information about missing individuals; Visual identification, photography, forensic procedures; Labelling, unique identification numbers; Dead bodies Identification Form	03	03	..	06

*Including through CDs, Video films etc., where available

Subjects	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Storage of Dead bodies: Storage options; Temporary burial Disposal / Long-term Storage: Release of identified dead bodies to relatives / communities; Methods of disposal / Long-term storage; Cultural and religious aspects; Location of burial sites; Grave construction; Health & hygiene precautions Information Management: Key role of information; Chain of custody; Information to the public; Psycho-social support for families; Interface with media; Organisational arrangements for information management				
Total	**03**	**03**	**..**	**06**

H. COMMUNICATION DURING EMERGENCIES

Radio Telephony Procedures (relating to NDRF communication equipment); How to speak on RT; Standard pro-words; System of calling and answering; Establishing of communication; Changing of frequency; Time signals by RT; Signal strength.	02	01	03	06
Use of Morse Code (including Practicals on receiving and sending messages).	01	01	04	06
Indian Wireless Radio Regulations.	01	..	..	01
Mobile Phone, Satellite Phone, Ham Radio Service.	01	02	02	05
Maintenance of Communication Record.	01	..	01	02
Total	**06**	**04**	**10**	**20**

*Including through CDs, Video films etc., where available

I. BEHAVIOURAL SKILLS & PERSONAL DEVELOPMENT

Subjects	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Communication Skills	02	..	..	02
Inter-Personal Skills; Guidelines for clear inter-personal communication	04	..	..	04
Listening and Empathy Skills	02	..	..	02
Team Skills – What makes a good team? Process Skills for Team Building; Task orientation for teams; Motivating team members; Building processes of Team Skills.	04	..	..	04
Motivational Skills – motivating self and others.	02	..	..	02
Stress Management	04	..	..	04
Health Management	02	..	..	02
Total	**20**	**..**	**..**	**20**

J & K. ROCK CLIMBING & SLITHERING

Rock Climbing	..	..	36	36
Slithering	..	..	24	24
Total	**..**	**..**	**60**	**60**

Feedback, Course Evaluation and Valediction	04			04
Total	**225**	**84**	**305**	**614**
Field visits & Spare periods				20
Grand Total				**634**

*Including through CDs, Video films etc., where available

ORITENTATION COURSE FOR FIRST RESPONDERS OF STATE DISASTER RESPONSE FORCES (SDRFs)

(4 Weeks)

LEVEL OF PARTICIPANTS

Members of state police forces, Home Guards, Civil Defence volunteers and other personnel nominated by state governments.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- have an idea about the various types of disasters and to understand the basic principles of disaster response in different situations;
- understand the concepts, methodology and techniques of search and rescue operations in different disaster situations, including collapsed structure search and rescue operations, urban search and rescue operations and rope rescue operations, as also become familiar with the various equipment and tools used for the same;
- learn the various methods and techniques of evacuating casualties;
- become familiar with the essentials of fire fighting and control;
- acquire the requisite life saving skills needed for water and flood rescue operations;
- broadly understand the causes of, and the nature of threats caused by, nuclear, biological and chemical disasters, as also the basic principles of management of the NBC emergencies;
- gain familiarity with the emergency medical services system, the various kinds of medical emergencies encountered in disaster situations, as also the principles of triage and basic life support systems;
- become familiar with the basics of communication, including radio telephony procedures, satellite phones, Internet and Ham Radio, used in disaster situations; and
- understand the importance and methods of dignified management of dead bodies, in disaster situations.

The **emphasis** of this course will be on the specific **skills necessary for the first responders in disaster situations.**

COURSE DURATION

1. Duration of the Course .. 4 weeks (28 days)

3. Sundays (4), Second Saturdays (1) and Holidays (1) .. 6

3. No. of working days available .. 22

4. Full working days .. 19

5. Half working days (Saturdays) .. 3

6. No. of periods in a working day .. 9

7. No. of periods in half-working days .. 5

8. No. of periods available .. 186

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs. .. P.T. / Yoga

0900 – 0940 hrs. .. I Period
0940 – 1020 hrs .. II Period
1020 – 1100 hrs. .. III Period

1100 – 1130 hrs. .. Tea Break

1130 – 1210 hrs. .. IV Period
1210 – 1250 hrs. .. V Period
1250 – 1330 hrs. .. VI Period

1330 – 1500 hrs. .. Lunch Break

1500 – 1540 hrs. .. VII Period
1540 – 1620 hrs. .. VIII Period

1620 – 1640 hrs. .. Tea Break

1640 – 1720 hrs. .. IX Period

1730 – 1830 hrs. .. Games

ORIENTATION COURSE FOR FIRST RESPONDERS OF STATE DISASTER RESPONSE FORCES (SDRFs)

(4 Weeks)

Block Syllabus

Module	Subject	Periods to be assigned			
		Theory	Demo*	Pract.	Total
	Registration & Inauguration	03	..	..	03
A	Collapsed Structure, Search and Rescue	15	15	22	52
B	Essentials of Fire Fighting & Control	06	04	..	10
C	Rope Rescue	07	07	11	25
D	Water and Flood Rescue	08	02	..	10
E	Medical First Response	15	08	07	30
F	Radiological Emergencies	05	07	..	12
G	Biological Emergencies	05	02	..	7
H	Chemical Emergencies	07	04	,,	11
I	Communication during Disasters	02	02	..	04
J	Dignified Management of Dead Bodies	03	03	..	06
K	Case Studies of Major Disaster Events	06	..	..	06
L	Disaster Management Act 2005; National Disaster Management Authority (NDMA); National Disaster Response Force (NDRF)	02	..	..	02
	Course feedback & Valediction	03	..	..	03
	Spare periods	05	..	..	05
	Total	**92**	**54**	**40**	**186**

*Including through CDs, Video films etc., where available

ORIENTATION COURSE FOR FIRST RESPONDERS OF STATE DISASTER RESPONSE FORCES (SDRFs)

(4 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	**03**	..	..	**03**
A. Collapsed Structure, Search & Rescue				
Principles of Search and Rescue	01	..	..	01
Search & locating techniques	02	02	02	06
Rescue strategies and techniques	01	02	02	05
Tools, equipments and accessories for search and rescue	01	01	02	04
Structural triage and marking	01	02	03	06
Operational safety	02	02	..	04
Principles of shoring	01	01	..	02
Definitions, types, conditions for shoring	01	01	..	02
Procedures for building shores	01	01		02
Practicals on all aspects of shoring	..	..	05	05
Debris tunneling	01	..	..	01
Confined space rescue	01	01	..	02
Improvised rescue devices	01	01	..	02
Lifting and stabilizing loads	01	01	..	02
Simulation exercises on CSSR			08	08
Total	**15**	**15**	**22**	**52**

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
B. Essentials of Fire Fighting & Control				

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Introduction: Classification of fires, Chemistry of fire, Causes & principles of extinction	01	..	..	01
Action in case of fire: Fire-fighting methods	01	01	..	02
Fire fighting equipment	01	01	..	02
Sprinkler system, Drenchers, Risers, Hose-reel, Hydrants and other fire extinguishers	01	02	..	03
Salvage: Rescue of casualties and resuscitation	02	..	..	02
Total	**06**	**04**	**..**	**10**
C. Rope Rescue				
Rescue supervision and safety management	01	01	02	04
Emergency Techniques (from higher & lower levels)	01	01	02	04
Basic action for rescue operation	01	01	..	02
Water rescue techniques with rope	01	01	02	04
Climbing, crossing and descending techniques; Knots and Hitches	01	01	02	04
Heat and smoke tolerance training	01	01	01	03
Entry techniques	01	01	02	04
Total	**07**	**07**	**11**	**25**
D. Water and Flood Rescue				
Significance of water rescue training, safe water practices, survival in water, Self-preservation, Recognizing an emergency, Assessment before and during a rescue; Priorities of rescue; Use of bystanders	02	.. .	..	02
Knowledge of terrains, weather conditions, camping ground, knowledge of high and low ground, Video films on tropical flood situations	02	02	..	04

* Including through CDs, Video films et., where available

	Periods to be assigned

Topics	Theory	Demo*	Pract.	Total
Underwater physiology & First Aid	02	..	..	02
Types of emergencies; Management of diving emergencies; Emergency diving equipment, Emergency procedure, Safe-diving operational procedure	02	..	..	02
Total	**08**	**02**		**10**
E. Medical First Response				
The Emergency Medical Services system and the Medical Responder	01	01	..	02
Infectious disease precautions	01	01	..	02
The Incident – types of incident, scene assessment	01	01	..	02
Initial assessment and physical examination	01	..	01	02
Basic Life Support and Cardiopulmonary Resuscitation (BLS & CPR)	01	..	01	02
Oxygen therapy	01	..	01	02
Hemorrhage and shock	01	..	..	01
Injuries – Soft tissue injuries, Musculoskeletal injuries, Injuries to the skull, spine and chest	01	..	01	02
Burns and environmental emergencies	01	01	..	02
Poisoning	01	..	..	01
Medical emergencies: Cardiovascular emergencies and CVA, seizures, diabetic and abdominal emergencies	01	01	..	02
Respiratory emergencies	01	01	..	02
Lifting and moving patients	01	01	01	03
Report writing and preparing for the next call	01	..	01	02

* Including through CDs, Video films et., where available

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Triage	01	01	01	03
Total	**15**	**08**	**07**	**30**
F. Radiological Emergencies				
Radiological terrorism and nuclear threats; Video film on Hiroshima-Nagasaki explosions	01	02	..	03
Different types of radiation	01	..	..	01
Radiation protection	01	01	..	02
Detection and monitoring equipments	01	02	..	03
Contamination and decontamination procedures	01	02	..	03
Total	**05**	**07**	**..**	**12**
G. Biological Emergencies				
Biological threats	01	..	..	01
Recognition of biological hazards	01	..	..	01
Health effects of bio-hazards	01	..	..	01
Biological agents – detection and sampling	01	..	..	01
Decontamination procedures	01	02	..	03
Total	**05**	**02**	**..**	**07**
H. Chemical Emergencies				
Types of Chemical warfare agents and their effects	02	..	..	02
Identification and health hazards of hazardous chemicals	02	..	..	02
Confinement and containment of hazardous chemicals	01	01	..	02
Chemical detection instruments	01	01	..	02

* Including through CDs, Video films et., where available

	Periods to be assigned

Topics	Theory	Demo*	Pract.	Total
Decontamination procedures	01	02	..	03
Total	**07**	**04**	**..**	**11**
I. Communication during Disasters	**02**	**02**		**04**
J. Dignified Management of Dead Bodies				
Body Recovery: Need for rapid retrieval; Methods and procedures of recovering dead bodies; Personal belongings of the dead; Health and safety precautions Identification of Dead bodies: Need for maximizing identification; Methods of identification – Matching the deceased with information about missing individuals; Visual identification, photography, forensic procedures; Labelling, unique identification numbers; Dead bodies Identification Form Storage of Dead bodies: Storage options; Temporary burial Disposal / Long-term Storage: Release of identified dead bodies to relatives / communities; Methods of disposal / Long-term storage; Cultural and religious aspects; Location of burial sites; Grave construction; Health & hygiene precautions Information Management: Key role of information; Chain of custody; Information to the public; Psycho-social support for families; Interface with media; Organisational arrangements for information management	**03**	**03**	..	**06**
K. Case Studies of Major Disaster Events	**06**	..	..	**06**
L. DM Act, 2005; National Disaster Management Authority (NDMA) set up; National Disaster Response Force (NDRF)	**02**	**..**	**..**	**02**

* Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Course Feedback; Valediction	**03**	..	..	**03**
Spare periods	**05**	..	..	**05**
Grand Total	**92**	**54**	**40**	**186**

* Including through CDs, Video films etc., where available

TRAINING OF TRAINERS COURSE IN DISASTER RESPONSE FOR FACULTY MEMBERS OF TRAINING INSTITUTIONS OF STATE GOVERNMENTS / CENTRAL POLICE FORCES (CPFs)

(6 Weeks)

LLEVEL OF PARTICIPANTS

Those appointed to man the faculty positions for disaster response training in the training institutions of state governments as also of the central police forces.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- understand, from a trainer's perspective, the concepts of search and rescue operations, rope rescue, water and flood rescue, as also management of nuclear, biological and chemical emergencies, and medical emergencies and to explain the same to the trainees, including effectively handling their questions, doubts, etc.;
- acquire mastery over the handling and use of the various tools and equipment of search and rescue and other disaster response operations;
- develop the requisite 'direct trainers' skills' including having an understanding of the socio-psychological principles of adult learning;
- use group-centered training methods and other training methodologies such as role playing, simulation, etc.;
- prepare lesson plans and use training aids, such as transparencies, slides and power-point presentations;
- plan and conduct mock drills in disaster response; and
- perform as effective trainers in training programmes for first responders.

COURSE DURATION

1.	Duration of the Course	.. 6 weeks (42 days)
4.	Sundays (6), Second Saturdays (1) and Holidays (1)	.. 8
3.	No. of working days available	.. 34
4.	Full working days	.. 29
5.	Half working days (Saturdays)	.. 5
6.	No. of periods in a working day	.. 9
7.	No. of periods in half-working days	.. 5
9.	No. of periods available	.. 291

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(6 Weeks)

Block Syllabus

Modules	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration & Inauguration	03	..	..	03
Disaster Response-related Inputs				
Collapsed Structure Search and Rescue	22	22	26	70
Rope Rescue	09	09	12	30
Water and Flood Rescue	08	02	..	10
Essentials of Fire Fighting & Control	07	05	..	12
Medical First Response	18	15	11	44
Radiological Emergencies	07	05	03	15
Biological Emergencies	06	02	..	08
Chemical Emergencies	08	03	03	14
Communication during Disasters	02	02	..	04
Dignified Management of Dead Bodies	03	03	..	06
Case Studies of Major Disaster Events	06	..	..	06
Disaster Management Act 2005; National Disaster Management Authority (NDMA); National Disaster Response Force (NDRF)	02	..	..	02
Direct Trainers' Skills	28	06	23	57
Course Feedback & Valediction	03	..	..	03
Spare periods	07	..	..	07
Total	**139**	**74**	**78**	**291**

* Including through CDs, Video films etc., where available

(6 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	03	..	..	03
Disaster Response-related Inputs				
Collapsed Structure, Search & Rescue				
Principles of Search and Rescue	02	..	..	02
Search & locating techniques	02	02	04	08
Rescue strategies and techniques	02	02	04	08
Tools, equipments and accessories for search and rescue	02	02	04	08
Structural triage and marking	02	02	02	06
Operational safety	02	02	..	04
Principles of shoring	02	02	..	04
Definitions, types, conditions for shoring	02	02	..	04
Procedures for building shores	02	02		04
Practicals on all aspects of shoring	..	..	04	04
Debris tunneling	01	..	..	01
Confined space rescue	01	02	..	03
Improvised rescue devices	01	02	..	03
Lifting and stabilizing loads	01	02	..	03

* Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

Simulation exercises on CSSR			08	08
Total	**22**	**22**	**26**	**70**
Rope Rescue				
Rescue supervision and safety management	02	02	02	06
Emergency Techniques (from higher level)	01	01	02	04
Emergency Techniques (from lower level)	01	01	02	04
Basic action for rescue operation	01	01	..	02
Water rescue techniques with rope	01	01	01	03
Climbing, crossing and descending techniques; Knots and Hitches	01	01	02	04
Heat and smoke tolerance training	01	01	01	03
Entry techniques	01	01	02	04
Total	**09**	**09**	**12**	**30**
Water and Flood Rescue				
Significance of water rescue training, safe water practices, survival in water, Self-preservation, Recognizing an emergency, Assessment before and during a rescue; Priorities of rescue; Use of bystanders	02	.. .	..	02
Knowledge of terrains, weather conditions, camping ground, knowledge of high and low ground, Video films on tropical flood situations	02	02	..	04
Underwater physiology & First Aid	02	..	..	02
Types of emergencies; Management of diving emergencies; Emergency diving equipment, Emergency procedure, Safe-diving operational procedure	02	..	..	02
Total	**08**	**02**	**..**	**10**

* Including through CDs, Video films etc., where available

Topics	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**
Essentials of Fire Fighting & Control				

Introduction: Classification of fires, Chemistry of fire, Causes & principles of extinction	02	..	..	02
Action in case of fire: Fire-fighting methods	01	01	..	02
Fire fighting equipment	01	01	..	02
Sprinkler system, Drenchers, Risers, Hose-reel, Hydrants and other fire extinguishers	01	03	..	04
Salvage: Rescue of casualties and resuscitation	02	..	..	02
Total	**07**	**05**	**..**	**12**
Medical First Response				
The Emergency Medical Services system and the Medical First Responder	02	01	..	03
Infectious disease precautions	01	02	..	03
The Incident – types of incident, scene assessment	01	01	..	02
Initial assessment and physical examination	02	01	02	05
Basic Life Support and Cardiopulmonary Resuscitation (BLS & CPR)	01	01	02	04
Oxygen therapy	01	01	01	03
Hemorrhage and shock	02	..	..	02
Injuries – Soft tissue injuries, Musculoskeletal injuries, Injuries to the skull, spine and chest	01	01	02	04
Burns and environmental emergencies	01	01	..	02
Poisoning	01	..	..	01
Medical emergencies: Cardiovascular emergencies and CVA, seizures, diabetic and abdominal emergencies	01	01	..	02

* Including through CDs, Video films etc., where available

Topics	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**
Respiratory emergencies	01	01	..	02
Childbirth emergencies		01	..	01

Lifting and moving patients	01	01	01	03
Report writing and preparing for the next call	01	01	01	03
Triage	01	01	02	04
Total	**18**	**15**	**11**	**44**
Radiological Emergencies				
Radiological terrorism and nuclear threats; Video film on Hiroshima-Nagasaki explosions	01	02	..	03
Phenomenon of nuclear explosion	01	..	..	01
Different types of radiation	02	..	..	02
Radiation protection	01	01	..	02
Detection and monitoring equipments	01	01	01	03
Contamination and decontamination procedures	01	01	02	04
Total	**07**	**05**	**03**	**15**
Biological Emergencies				
Biological threats	01	..	..	01
Terrorist use of biological agents	01	..	..	01
Recognition of biological hazards	01	..	..	01
Health effects of bio-hazards	01	..	..	01
Biological agents – detection and sampling	01	01	..	02
Decontamination procedures	01	01	..	02
Total	**06**	**02**	**..**	**08**

* Including through CDs, Video films etc., where available

Topics	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**
Chemical Emergencies				
Threat from hazardous chemicals	01	..	..	01

Types of Chemical warfare agents and their effects	02	..	..	02
Identification and health hazards of hazardous chemicals	02	..	..	02
Confinement and containment of hazardous chemicals	01	01	..	02
Chemical detection instruments	01	01	01	03
Decontamination procedures	01	01	02	04
Total	**08**	**03**	**03**	**14**
Communication during Disasters	**02**	**02**		**04**
Dignified Management of Dead Bodies				
Body Recovery: Need for rapid retrieval; Methods and procedures of recovering dead bodies; Personal belongings of the dead; Health and safety precautions Identification of Dead bodies: Need for maximizing identification; Methods of identification – Matching the deceased with information about missing individuals; Visual identification, photography, forensic procedures; Labelling, unique identification numbers; Dead bodies Identification Form Storage of Dead bodies: Storage options; Temporary burial Disposal / Long-term storage: Release of identified dead bodies to relatives / communities; Methods of disposal / Long-term storage; Cultural and religious aspects; Location of burial sites; Grave construction; Health & hygiene precautions	03	03	..	06

* Including through CDs, Video films etc., where available

Topics	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**
Information Management: Key role of information; Chain of custody; Information to the public; Psycho-social support for families; Interface with media; Organisational arrangements for information management				

Total	**03**	**03**	**..**	**06**
Case Studies of Major Disaster Events	**06**	..	..	**06**
DM Act, 2005; National Disaster Management Authority (NDMA)set up ; National Disaster Response Force (NDRF)	**02**	..	..	**02**
DIRECT TRAINERS' SKILLS				
Principles of Adult Learning: Definition of learning; Types of learning; Factors that influence adult learning; Individual differences in adult learning; Types of adult learners; Motivating the trainee : Maslow's Hierarchy of Needs.	04	..	..	04
Communication skills	04	..	..	04
Presentation skills: Principles of receptive communication; Elements of effective presentations; How to plan and prepare effective presentations	04	02	..	06
Audio-visual aids Need for audio-visual aids; Familiarization with audio-visual aids; Advantages and disadvantages of various audio-visual aids; Standard formats for preparing transparencies, slides, flip charts and power-point presentations.	02	02	04	08
Various Methods of Instruction: Steps of interactive lecture presentation and demonstration practice method; Role Play. Simulation Exercises; Group discussion	04	..	04	08
Planning a lesson Importance of planning a lesson; Planning formats in interactive lecture method and demonstration practice method; Different criteria of sequencing.	04	..	04	08

* Including through CDs, Video films etc., where available

Topics	**Periods to be assigned**			
	Theory	**Demo***	**Pract.**	**Total**
Course coordination: Importance and steps involved in preparation for the Course; Role and duties of Course Coordinator	02	..	..	02

Planning, organizing and conducting of mock drills	..	02	02	04
Testing and Evaluation of Training: What, why, when and how we test; Test validity and reliability; Various methods of evaluation of training.	04	..	..	04
Individual Practice (Practical): Testing of participants for individual lectures and presentations (Videograph – Feedback – Repeat)	..	..	09	09
Total	**28**	**06**	**23**	**57**
Course Feedback; Valediction	3	..	..	3
Spare periods	07			07
Grand Total	**139**	**74**	**78**	**291**

* Including through CDs, Video films etc., where available

JOINT STAFF COURSE IN DISASTER RESPONSE FOR MIDDLE-LEVEL OFFICERS OF STATES AND NDRF BNS.

(1 Week)

LEVEL OF PARTICIPANTS

District Magistrates, Additional District Magistrates, Sub-Divisional Magistrates, Superintendents of Police, Additional Superintendents of Police, Deputy Superintendents of Police and equivalent ranks of other Departments (Medical, Engineering, etc.) of the State Governments; Commandants, Deputy Commandants and Assistant Commandants of NDRF Bns.

OBJECTIVES

After undergoing this course, the participants should be able to:

- understand the causes of various types of disasters as also the principles and operational aspects of effective response to disasters including NBC emergencies;
- become familiar with the concepts of integrated response and the Incident Command System, as also with the strategies as well as mechanism for inter-departmental and inter-agency coordination;
- become aware of the role and tools of modern technology in disaster response;
- understand the role, functions and the mechanisms of setting up of a 'command & control centre' as well as an emergency hospital at the disaster site;
- appreciate the role and mechanism of community participation in disaster management;
- appreciate the importance and modalities of continuous training of personnel in emergency response; and
- develop an understanding of the issues of law enforcement, public order, public information and media interface in disaster response situations.

COURSE DURATION

1. Duration of the Course .. 1 week (5 ½ days)

2. No. of periods in a working day .. 8

3. No. of periods on Saturday .. 5

4. No. of periods available .. 45

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs. .. P.T. / Yoga

0930 – 1015 hrs .. I Period
1015 – 1100 hrs. .. II Period

1100 – 1115 hrs. .. Tea

1115 – 1200 hrs. … III Period
1200 – 1245 hrs. .. IV Period
1245 – 1330 hrs. .. V Period

1330 – 1500 hrs. .. Lunch

1500 – 1545 hrs. .. VI Period
1545 – 1630 hrs. .. VII Period

1630 – 1645 hrs. .. Tea

1645 – 1730 hrs. .. VIII Period

1745 – 1830 hrs. .. Games

(1 Week)

Block Syllabus

Modules	Periods to be assigned			
	Theory	**Demo**	**Pract.**	**Total**
Registration; Course Introduction; Inauguration	02	..	..	02
Causes of Disaster & Disaster Management	03	..	..	03
The Response	16	..	..	16
Technologies and Equipment for Disaster Response	07	..	..	07
SWOT Analysis of Response Agencies	02	..	..	02
Training Issues for Effective Disaster Response	03	..	..	03
Law Enforcement and Public Order Issues in Disaster Response	02	..	..	02
Public Information Issues & Media Management	02	..	..	02
Syndicate Study & Report Presentation	06	..	..	06
Course Feedback; Valedictory session	02	..	..	02
Total	**45**	**..**	**..**	**45**

(1 Week)

Detailed Syllabus

Subject	Periods to be assigned			
	Theory	**Demo**	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	02	..	..	02
Causes of Disaster & Disaster Management				
Causes of Disaster including Weapons of Mass Destruction (WMDs)	01	..	..	01
Disaster Management – An overview	02	..	..	02
The Response				
Planning, principles and operational concepts in management of response to different types of disasters including NBC emergencies	02	..	..	02
Integrated Response Concept	01	..	..	01
Incident Command System; Training, equipping and response integration at different levels	02	..	..	02
Inter-agency coordination in disaster response	02	..	..	02
Community participation in disaster response	01	..	..	01
Standard Operating Procedures	02	..	..	02
Case studies on Disaster Response – Analysis and experience sharing	02	..	..	02
Role, functions and setting up a Command and Control Centre at disaster site	02	..	..	02

Subject	Periods to be assigned			
	Theory	**Demo**	**Pract.**	**Total**
Setting up an Emergency Hospital at disaster site	01	..	..	01
Arrangements for relatives of victims and other visitors	01	..	..	01
Technologies and Equipment for Effective Response				
Equipment requirements in Management of Disasters and NBC Emergencies: Understanding the principles and practical use	02	..	..	02
Equipment, supplies, inventory of supplies for contingencies.	02	..	…	02
Latest advancements in technology and equipment for Disaster Response	01	..	..	01
Role of GPS and GIS, and Date-bases in Disaster Response	02	..	…	02
SWOT Analysis of Response Agencies				
SWOT Analysis of response agencies, based on case studies and in the light of experiences in Mock Exercises.	02	..	..	02
Training Issues related to Disaster Response				
Current status of Training – An Overview	01	..	..	01
Training for sustained performance: Need and modalities	02	..	..	02
Law Enforcement Issues in Disaster Response				
Law enforcement and public order issues in disaster response	02	..	..	02
Public Information Issues & Media Management				
Public information issues and interface with media in disaster response	02	..	..	02

Subject	Periods to be assigned			
	Theory	**Demo**	**Pract**	**Total**
Syndicate Study and Report Presentations	06	..	..	06
Course Feedback; Valedictory session	02	..	..	02
Total	**45**	**..**	**..**	**45**

EQUIPMENT MAINTENANCE COURSE

(1 Week)

LELVEL OF PARTICIPANTS

Officials responsible for the custody and maintenance of disaster response equipment in NDRF Bns., NDRF training institutions and similar units in the states.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- fully understand the application and importance of various equipment, tools and accessories used in disaster response operations, including personal protective equipment for CSSR, MFR, Water Rescue and NBC emergency operations;

- become familiar with the technical specifications of equipments and tools as also with mechanics of the day-to-day maintenance, handling and safety procedures in operating the same;

- locate faults in the equipment and take up trouble-shooting to the extent possible; and

- learn the procedures of log maintenance of inspection and repair, overhauling and calibration, sensitivity checks of equipment.

COURSE DURATION

1.	Duration of the Course	.. 1 week (5 ½ days)
2.	No. of periods in a working day	.. 9
3.	No. of periods in half-working day	.. 6
4.	No. of periods available	.. 51

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

EQUIPMENT MAINTENANCE COURSE

(1 Week)

Detailed Syllabus

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	02	..	..	02
Equipment for Disaster Management and NBC Scenario – An overview	01	..	..	01
Nature and importance of various items of equipment, tools and accessories for NDRF in mission accomplishment	02	..	..	02
Equipment (including tools & accessories) for CSSR operations: Principles / Application / Demonstration of each	02	02	02	06
Technical specifications; Classification according to operation; Handling and safety procedures in operating the equipment; Maintenance schedule of each equipment; Locating faults & trouble shooting	02	02	01	05
Hydraulic Rescue Equipment	01	01	..	02
Equipment for Rope Rescue operations: Principles / Application / Demonstration of each	01	02	01	04
Technical specifications, handling and safety procedures in operating the equipment; Maintenance schedule of each equipment; Locating faults & trouble shooting	01	01	01	03

*Through CDs, Video films etc., in addition to actual equipment

	Periods to be assigned

Subject	Theory	Demo*	Pract.	Total
Personal Protective Equipment for CSSR and MFR	01	01	01	03
MFR Kit	..	01	01	02
Radiation Survey and Measuring equipment: Principles / Application / Demonstration of each	01	02	01	04
Technical specifications, handling and safety procedures in operating equipment; Maintenance schedule of each equipment; Locating faults & trouble shooting	01	..	01	02
Chemical and Biological emergencies equipment: Principles / Application / Demonstration of each	01	01	..	02
Technical specifications, handling and safety procedures in operating the equipment; Maintenance schedule of each equipment; Locating faults & trouble shooting	01	01	01	03
Maintenance of power source and consumables	01	01	..	02
Log maintenance of inspection, repairs; overhauling and calibration; Sensitivity checks	..	01	01	02
Practical tests	..	..	04	04
Course Feedback; Valediction	02	..	..	02
Total	**20**	**16**	**15**	**51**

***** Through CDs, Video films etc., in addition to actual equipment.

ADVANCED COURSE IN
COLLAPSED STRUCTURE SEARCH & RESCUE (CSSR)

(2 Weeks)

LEVEL OF PARTICIPANTS

NDRF personnel, who have already undergone the 12-week Basic Course for First Responders, and have secured more than 60% marks in the tests and assessment in that course.

OBJECTIVES

After undergoing this course, the participants should be able to:

- fully understand the various phases of CSSR operations and planning, organizing, coordinating and implementing the same;
- develop a good understanding of the concepts of critical incident planning with special reference to CSSR, including the major steps, tactical considerations and integrated response concept;
- become familiar with the concepts and functioning of the Incident Command System;
- develop good knowledge and skills in the various advanced techniques used in CSSR operations including handling of conventional as well as modern tools and equipment;
- acquire good knowledge about the use of GIS and GPS in disaster response operations; and
- develop full confidence in organizing a CSSR operation.

COURSE DURATION

1.	Duration of the Course	.. 2 weeks (14 days)
2.	Sunday	.. 2
3.	No. of working days available	.. 12
4.	Full working days	.. 10
5.	Half working days (Saturdays)	.. 2
6.	No. of periods in a working day	.. 9
7.	No. of periods in a half-working day	.. 6
8.	Total no. of periods available	.. 102

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(2 Weeks)

Block Syllabus

Module	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
CSSR – An overview	06	..	..	06
The Disaster Response Mechanism	15	01	..	16
Training Issues	07	..	..	07
CSSR-related Advanced Inputs	16	13	09	38
Simulation Exercises	..	05	14	19
Report Writing	02	..	04	06
Course Evaluation & Feedback; Valediction	04	..	..	04
Spare periods	03	..	..	03
Total	**56**	**19**	**27**	**102**

*Including through CDs, Video films etc., where available

ADVANCED COURSE IN
COLLAPSED STRUCTURE SEARCH & RESCUE (CSSR)

(2 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction - Purpose, objectives and methodology; Inauguration	03	..	..	03
CSSR – An overview				
Emergency Response – CSSR Team Mission & Organization	02	..	..	02
CSSR Operation: Planning, Organizing and Implementing	02	..	..	02
Phases of a CSSR Operation	02	..	..	02
The Disaster Response Mechanism				
Response policy and response machinery at local, District, State and Central levels	01	..	..	01
National Disaster Management Act; National Disaster Management Authority set up	02	..	..	02
Role of various stake-holders in Disaster Response with special reference to CSSR • Police, Armed Forces and Civil Defence Volunteers • Civil Administration • NGOs & the community	02	..	..	02
Integrated Response Concept including ways and means to promote coordinated response	02	..	..	02
Critical Incident Planning with special reference to CSSR – Major steps and tactical considerations	02	..	..	02

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Incident Command System: Concepts, application and how it functions	02	01	..	03
Relevant Statutes, Manuals and Executive Instructions on Disaster Management issued by Government	02	..	..	02
Experience sharing: Ways and means to improve the effectiveness of response (Group Discussion)	02	..	..	02
Training Issues				
Conducting community awareness programmes on CSSR	02	..	..	02
Day-to-day training of individuals in CSSR teams	02	..	..	02
Day-to-day team-level training in CSSR	02	..	..	02
Sustainment of training	01	..	..	01
CSSR-related Advanced Inputs				
Advanced inputs in structural triage and the INSARAG Marking System & Guidelines	02	02	..	04
Emerging developments in rescue strategies and techniques	02	01	..	03
Conventional and modern (including advanced) equipment, tools and accessories	01	02	02	05
Vehicle Extrication	02	02	02	06
Tunnel Search	01	02	03	06
Use of Global Information System and Global Positioning System in Disaster Response	02	02	02	06
Resource mapping and augmentation	02	..	..	02

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Case studies of major CSSR Operations and their analyses	04	..	..	04
Classical video films on CSSR	..	02	..	02
Simulation Exercises				
Setting up of an Emergency Operations Centre, including Disaster Response Communications set up	..	02	03	05
Organizing, triaging and starting a CSSR Operation	..	02	05	07
Extrication of victims and Pre-hospital treatment	..	01	02	03
Trouble shooting in handling of equipment	..	..	04	04
Report Writing	02	..	04	06
Course Feedback and Valediction	04	..	..	04
Spare periods	03	..	..	03
Total	**56**	**19**	**27**	**102**

* Including through CDs, Video films etc., where available

Annexure

Equipment for Advanced CSSR Course
(USAID / PEER Programme)

Sl.No.	Description	Quantity
1.	De Walt Heavy Duty Air Compressor	1
2.	Air Compressor Accessory Kit	1
3.	Torque Wrench	1
4.	Job Boxes	4
5.	USAR EVR Rope Rescue Kit	1
6.	LSP Half Back	1
7.	Life Detector, Mongoose	1
8.	Life Detector, Listening Device (4 sensors)	1
9.	De Walt 14 inch Chop Saw	2
10.	Chop Saw Blade Kit	2
11.	Cutter, Rebar, Electric, Maximum cutting capacity 5/8”	1
12.	Gun, Nail, Pneumatic, 8D through 16D general purpose	2
13.	Life Detector, Search cam 2000	1
14.	Pneumatic, Air hose 50’ sections	4
15	Gun, Nail, Pneumatic, Nails 8D box	10
16.	Gun, Nail, Pneumatic, Nails 16D box	10
17.	Ellis Screw Jack	6
18.	Ellis Clamp	6
19.	Shackles, Screw Pin 1-1/2”, 12 ton	4
20.	Shackles, Screw Pin 5/8” 3-1/4 ton	4
21.	Saw horses	4
22.	Crane Straps	4
23.	Crane Sling chains	2
24.	5 ton Swivel hook	6

25.	Petrogen Portable cutting system	1
26.	Petrogen Oxygen Regulator	1
27.	Petrogen Hand cart	1
28.	Petrogen Heavy rescue package	1
29.	Oxy Acetylene Rescue Torch set	2
30.	Exothermic Torch set	1
31.	Torch Safety “Rescuer” PPE Kit	3
32.	Hilti Piston type nail gun	1
33.	Hilti Pin gun	1
34.	Stanley Hydraulic Power unit	1
35.	Stanley Power Unit 50’ hoses	2
36.	Stanley Concrete chain saw	1
37.	Stanley Concrete chain saw bar	1
38.	Stanley Concrete chain saw chain	1
39.	Stanley Hydraulic cut off saw	1
40.	Stanley Hydraulic cut off saw blade	1
41.	Stanley Hammer drill	1
42.	TNT Maintenance kit	1
43.	Partner system power unit	1
44.	Partner Ring saw	1
45.	Partner Core drill	1
46.	ICS Chain saw	1
47.	Anchor Bolts ¾ x 4 (10 pack)	10
48.	Pneumatic Shoring system (Collapse)	1
49.	Pneumatic Shoring system (USAR)	1

(2 Weeks)

LEVEL OF PARTICIPANTS

Those posted to impart training in CSSR operations, in NDRF training institutions as well as Battalions. The participants should have already undergone the 12-week Basic Course for First Responders and should have secured at least 75% marks in tests and assessment in that course.

OBJECTIVES

After undergoing this course, the participants should be able to:

- understand, from a trainer's perspective, the concepts of collapsed structure search and rescue operations and to explain the same to the trainees, including effectively handling their questions, doubts, etc.;
- acquire mastery over the handling and use of the various tools and equipment relating to CSSR operations;
- develop the requisite 'direct trainer's skills' including having an understanding of the socio-psychological principles of adult learning;
- use individual-based as well as group-centered training methods and other training methodologies such as role playing, simulation, etc.;
- prepare lesson plans and use training aids, such as transparencies, slides and power-point presentations; and
- perform as an effective trainer in training programmes on CSSR operations.

COURSE DURATION

1. Duration of the Course .. 2 weeks (14 days)

3. Sundays .. 2

3. No. of working days available .. 12

4. Full working days .. 10

5. Half working days (Saturdays) .. 2

6. No. of periods in a working day .. 9

7. No. of periods in a half-working day .. 6

9. Total no. of periods available .. 102

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs. .. P.T. / Yoga

0900 – 0940 hrs. .. I Period
0940 – 1020 hrs .. II Period
1020 – 1100 hrs. .. III Period

1100 – 1130 hrs. .. Tea Break

1130 – 1210 hrs. .. IV Period
1210 – 1250 hrs. .. V Period
1250 – 1330 hrs. .. VI Period

1330 – 1500 hrs. .. Lunch Break

1500 – 1540 hrs. .. VII Period
1540 – 1620 hrs. .. VIII Period

1620 – 1640 hrs. .. Tea Break

1640 – 1720 hrs. .. IX Period

1730 – 1830 hrs. .. Games

TRAINING OF TRAINERS COURSE IN COLLAPSED STRUCTURE SEARCH & RESCUE (CSSR)

(2 Weeks)

Block Syllabus

Modules	Periods to be assigned			
	Theory	**Demo***	**Pract**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
CSSR-related Inputs**	15	10	10	35
Direct Trainers' Skills	28	06	23	57
Course Evaluation & Feedback; Valediction	03	..	..	03
Spare periods	04	..	..	04
Total	**53**	**16**	**33**	**102**

* Including through CDs, Video films etc., where available

** These will include all important aspects of the CSSR topics from a trainer's perspective.

TRAINING OF TRAINERS COURSE IN
COLLAPSED STRUCTURE SEARCH & RESCUE (CSSR)

(2 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	03	..	..	03
CSSR-RELATED INPUTS				
Principles of search and rescue	01	01	..	02
Search & locating techniques	01	01	..	02
Rescue strategies and techniques	01	01	02	04
Rope Rescue	01	01	01	03
Tools, equipment and accessories for search and rescue	01	01	02	04
Structural triage and marking	02	02	..	04
Operational safety	01	01	..	02
Principles of shoring	02	..	..	02
Debris tunneling	01	01	02	04
Confined space rescue	01	..	02	03
Improvised rescue devices	01	01	01	03
Latest trends and technological advancements in CSSR	02	..	..	02
DIRECT TRAINERS' SKILLS				
Principles of Adult Learning: Definition of learning; Types of learning; Factors that influence adult learning; Individual differences in adult learning; Types of adult learners; Motivating the trainees; Maslow's Theory of Motivation	04	..	..	04

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Communication skills	04	..	..	04

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Presentation skills: Principles of receptive communication; Elements of effective presentations; How to plan and prepare effective presentations	04	02	..	06
Audio-visual aids Need for audio-visual aids; Familiarization with audio-visual aids; Advantages and disadvantages of various audio-visual aids; Standard formats for preparing transparencies, slides, flip charts and power-point presentations	02	02	04	08
Various Methods of Instruction: Steps of interactive-lecture, presentation and demonstration-practice method; Role playing method; Simulation exercises; Group discussion	04		04	08
Planning a lesson Importance of planning a lesson; Planning formats in interactive-lecture method and demonstration-practice method; Different criteria of sequencing.	04	..	04	08
Course coordination: Importance and steps involved in preparation for a Course; Role and duties of Course Coordinator	02	..	..	02
Planning, organizing and conducting of mock drills	..	02	02	04
Testing and Evaluation of Training: What, why, when and how to test; Test validity and reliability; Various methods of evaluation of training.	04	..	..	04
Individual Presentations (Practical) : Testing of participants for individual lectures and presentations (Videograph – Feedback – Repeat)	..	..	09	09

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Course Feedback & Valediction	03	..	..	03
Spare periods	04	..	..	04
Total	**53**	**16**	**33**	**102**

* Including through CDs, Video films etc., where available

MASTER TRAINERS' COURSE IN COLLAPSED STRUCTURE SEARCH & RESCUE (CSSR)

(2 Weeks)

LEVEL OF PARTICIPANTS

NDRF personnel, who have already undergone (i) the 12-week Basic Course for First Responders, (ii) the Advanced Course in CSSR, and (iii) the Training of Trainers' Course in CSSR, having been assessed as outstanding in all these courses.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- develop full understanding, from a trainer's perspective, of the conventional as well as emerging concepts, techniques and methodology of CSSR operations, and to explain the same to the trainees and others, including effectively handling their questions, doubts, etc.;

- have a good conceptual understanding of the modern concepts of training, including socio-psychological aspects of training and principles of adult learning;

- develop mastery in various individualized and group centered methods of training as well as in the use of various training aids;

- fully understand the principles and methodologies of management of training, including development of resource material, course coordination, class room management, tools and techniques of testing and evaluation of training, etc.; and

- independently design and implement need-based training programmes in CSSR.

COURSE DURATION

1. Duration of the Course	.. 2 weeks (14 days)
4. Sundays	.. 2
3. No. of working days available	.. 12
4. Full working days	.. 10
5. Half working days (Saturdays)	.. 2
6. No. of periods in a working day	.. 9
7. No. of periods in half-working days	.. 6
10. Total no. of periods available	.. 102

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(2 Weeks)

Block Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
Advanced Inputs on CSSR	24	11	14	49
Advanced Inputs on Instructional Aspects	14	10	20	44
Course Feedback & Evaluation; Valediction	03	..	..	03
Spare periods	03	..	..	03
Total	**47**	**21**	**34**	**102**

* Including through CDs, Video films etc., where available

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	03	..	..	03
CSSR-related Advanced Inputs				
Integrated Response Concept including ways and means to promote coordinated response	02	..	..	02
Critical Incident Planning with special reference to CSSR – Major steps and tactical considerations	02	..	..	02
Incident Command System: Concepts, application and how it functions; Development of response in complex scenarios	02	01	..	03
General principles of assessment of an incident / overview of incident	02	..	..	02
Concepts of operational safety; Safety rules, Safety consideration for a CSSR mission	01	01	01	03
Advanced inputs in structural triage and marking; INSARAG (International Search And Rescue Advisory Group) Marking system & Guidelines	02	..	03	05
Emerging developments in rescue strategies and techniques	01	02	..	03
Conventional and modern (including advanced) tools, equipment and accessories for search and rescue	02	03	04	09
Use of Global Information System and Global Positioning System in Disaster Response	02	02	02	06

*Including through CDs, Video films etc., where available

Topics	Total periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Resource mapping and augmentation	02	..	..	02
Case studies of major CSSR Operations and their analyses	06	..	..	06
Classical video films on CSSR	..	02	..	02
Trouble shooting in handling of equipment	..	..	04	04
Inputs on Instructional Aspects				
Planning a lesson: Importance of planning a lesson; planning formats in interactive-lecture method and demonstration-practice method	01	02	02	05
Method of instruction: Adult learning; Audience characteristics; Various instructional methods and techniques; Class participation	02	02	03	07
Course coordination: Importance and steps involved in preparing for a course; Role and functions of course coordinator	02	02	02	06
Development of Training Material : Development, adaptation and translation of training material relevant to the local context.	02	02	..	04
Planning, organizing and conducting of Mock Drills	02	02	04	08
Class Room management: Principles of class room management.	02	..	..	02
Tools and Techniques of Testing and Evaluation of Training: Training needs analysis, test validity and reliability.	03	..	..	03

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Individual Presentations: Testing of participants for individual lectures and presentations (Videograph – Feedback – Repeat)	..	..	09	09
Course Feedback & Evaluation; Valediction	03	..	..	03
Spare periods	03	..	..	03
Total	**47**	**21**	**34**	**102**

*Including through CDs, Video films etc., where available

BASIC TRAINING FOR PARA-MEDICS & MEDICAL PERSONNEL OF NDRF BATTATLIONS & STATES

(15 Weeks)

LEVEL OF PARCIPANTS

All para-medics and medical personnel of the NDRF Battalions, as also medical officers and para-medics nominated by various state governments.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- have a good idea about the various types of disasters and to understand the basic principles of disaster response in different situations, including the concepts, techniques and methodologies of search and rescue operations;
- become familiar with the causes of, and the nature of threats caused by, nuclear, biological and chemical disasters, as also the basic principles of management of NBC emergencies;
- fully understand the basics of emergency medical response, the emergency medical services system and disaster medicine;
- become familiar with the principles of patient assessment and management, including pre-hospital management of different types of traumas and injuries, as well as cardiological and other emergencies;
- gain familiarity with pre-hospital medical management of nuclear, biological and chemical emergencies;
- understand the basics of communication, including radio telephony procedures, satellite phones, Internet and Ham Radio, used in disaster situations;
- set up an emergency hospital at disaster site for providing the requisite pre-hospital treatment to victims; and
- imbibe behavioural, team and empathy skills, useful for first responders in disaster situations, as also learn the basics of stress and health management.

The **emphasis** of this course should be on the specific **skills necessary for the medical first responders to carry out their assigned tasks.**

COURSE DURATION

1.	Duration of the Course	.. 15 weeks
2.	Internship	.. 2 weeks
3.	No. of weeks available at the institution	.. 13 weeks (91 days)
4.	Sundays (13), Second Saturdays (3) and Holidays during the period	.. 19
5.	No. of working days available	.. 72
6.	Full working days	.. 62
6.	Half working days (Saturdays)	.. 10
7.	No. of periods in a working day	.. 8 periods (45 minutes each)
8.	No. of periods in a half-working day	.. 5 periods
9..	No. of periods available	.. 546 periods

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0945 hrs.	.. I Period
0950 – 1035 hrs	.. II Period
1040 – 1125 hrs.	.. III Period
1125 – 1145 hrs.	.. Tea Break
1145 – 1230 hrs.	.. IV Period
1235 – 1320 hrs.	.. V Period
1320 – 1430 hrs.	.. Lunch Break
1430 – 1515 hrs.	.. VI Period
1520 – 1605 hrs.	.. VII Period
1605 – 1615 hrs.	.. Tea Break
1615 – 1700 hrs.	.. VIII Period
1730 – 1830 hrs.	.. Games

(15 Weeks)

Block Syllabus

No.	Module	Periods to be assigned				
		Theory	**Demo***	**Pract.**	**Revision & Tests**	**Total**
	Registration, Course Introduction and Inauguration	02	..	..	..	02
A.	Basics of Disaster Response Operations	12	06	21	..	39
B.	Basics of Emergency Medical Response & Disaster Medicine	17	04	05	07	33
C.	Patient Assessment: Basics of Human Anatomy and Physiology	23	13	14	07	57
D.	Pharmacology for Disaster Response	10	04	04	03	21
E.	Basic Trauma Life Support (BTLS)	11	10	08	05	34
F.	Types of Trauma: Mechanisms of Injury	24	15	02	05	46
G.	Fractures, Head and Spinal Injuries	10	11	10	04	35
H.	Medical Management of Nuclear, Biological and Chemical Emergencies	42	17	07	09	75
I.	Cardiological and other Emergencies	19	06	09	03	37

* Through Mannequins / CDs, Video Films, etc

No.	Module	Periods to be assigned				
		Theory	**Demo***	**Pract.**	**Revision & Tests**	**Total**
J	Other Common Medical Emergencies	09	04	06	02	21
K	Patient Immobilization and Extrication	12	08	08	05	33
L	Patient Management	10	12	12	05	39
M	Communication During Emergencies	06	03	09	..	18
N	Setting up of an Emergency Hospital at Disaster Site	07	07	06	..	20
O	Behavioural Skills & Personal Development	20	..	..	..	20
P	Internship at Lokmanya Hospital Trauma Centre, NIGDI, Pune, or Any Trauma Centre recognized by the State	2 Weeks				
Q	Submission of Course Reports and Feedback	06	..	..	..	06
	Feedback and Valediction	02	..	..	..	02
	Spare periods	08	..	..	..	08
	Total	**250**	**120**	**121**	**55**	**546**

* Through Mannequins / CDs, Video Films, etc

NDRF BATTATLIONS & STATES

(15 Weeks)

Detailed Syllabus

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	02	**..**	**..**	**02**
A. BASICS OF DISASTER RESCUE OPERATIONS				
Collapsed Structure, Search and Rescue (CSSR): Definition of CSSR; Overview of the Incident Command System; Phases of a CSSR Team Mission; Stages during the operation phases of a CSSR Incident; Basic organization of a CSSR Team.	02	..	..	02
Equipment, Tools and Accessories: Definitions of equipment; Tools and accessories; Classification according to use; Classification according to its operation; Steps to follow before, during and after using tools; Use of chipping hammer; Use of impact drill; Use of saws.	02	..	..	02
Life Detecting Devices: Use of various life detecting devices.	01	01	..	02
Methods of Evacuating Casualty without Equipment: Different ways of evacuating a casualty without equipment; Level ground rescue, viz, rescue on hand and knees; Drag out rescue; Two hand seat method; Four hand seat method; S Method; Firemen lift method; Piggy-back carry method; Reverse piggy-back carry method; Human crutch method; Cradle method; Human crawl method; Toe drag method; Fore and aft method.	01	01	04	06

*Through Mannequins / CDs, Video Films, etc.

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Operational Safety: Factors affecting safety; Operational guidelines; Unsafe actions and conditions; Safety rules; Safety considerations for each phase of a CSSR mission.	02	..	..	02
Exercise (three scenarios): Organizing and starting a CSSR operation; Searching for and locating victims; Gaining access to a victim; Extricating the victim; Providing pre-hospital treatment.	..	..	09	09
Basic Action for Rescue Operation: Search efforts; Searching in fires in wooden structures; Searching in fires in structures of fire resistant construction; Searching in fires in underground facilities; Searching in special fire situations; Evacuation guidelines	02	02	04	08
Climbing, Crossing and Descending Techniques: Setting the ropes; Securing; Climbing procedure viz. purezic climbing; Using hand & foot lock; Descending procedure viz. shoulder catching; Neck catching; Cross catching; Sitting suspension; Method to take working posture; Over hand descending; Rope crossing procedure viz. monkey crossing; Sailor crossing and try lean crossing; River rescue technique.	02	02	04	08
Total	**12**	**06**	**21**	**39**
B. BASICS OF EMERGENCY MEDICAL RESPONSE & DISASTER MEDICINE				
Emergency Medical Service (EMS) System: Disaster Medicine	02	..	..	02
Development of EMS: History	01	..	..	01

* Through Mannequins / CDs, Video Films, etc.

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Medical terminology	02	..	..	02
Principles of casualty management	02	..	..	02
Sizing up of disaster scene: Assessment of nature and magnitude of casualties	01	02	..	03
Role and responsibilities of paramedics	02	..	..	02
Principles of triage	02	01	03	06
Patient records	01	01	02	04
Patient confidentiality	01	..	..	01
Legal issues	01	..	..	01
Ethical issues	02	..	..	02
Revision	05	..	..	05
Tests	02	..	..	02
Total	**24**	**04**	**05**	**33**
C. PATIENT ASSESSMENT: BASICS OF HUMAN ANATOMY AND PHYSIOLOGY				
Basic Human Anatomy	02	01	..	03
Basic Human Physiology	02	01	..	03
Body vitals (pulse, temperature, blood pressure)	01	..	02	03
Body cavities and body planes	02	01	..	03
Cardio-vascular system	02	01	02	05
Respiratory system	02	01	01	04
Renal system	02	01	..	03
Cardio-pulmonary resuscitation, including Bag Valve Mask (BVM)	02	02	04	08
Patient prioritisation	01	..	..	01

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Unconscious patient	01	..	01	02
Patient assessment: Sequence of action	01	02	02	05
History-taking	01	01	..	02
Techniques of physical examination	02	02	02	06
Documentation / decision after patient assessment	02	..	..	02
Revision	05	..	..	05
Tests	02	..	..	02
Total	**30**	**13**	**14**	**57**
D. PHARMACOLOGY				
Drug information	02	..	..	02
Mechanism of drug action	02	01	..	03
Modes of drug administration	02	01	..	03
Venous access / Intravenous medication	02	..	02	04
Medical Asepsis	01	01	..	02
Disinfection and decontamination of ambulances	01	01	2	04
Revision	02	..	..	02
Test	01	..	..	01
Total	**13**	**04**	**04**	**21**
E. BASIC TRAUMA LIFE SUPPORT (BTLS)				
Airway management and ventilation	02	02	02	06
Respiratory physiology	01	01	..	02
Mechanism of respiration	01	..	..	01

*Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Foreign body airway obstruction	01	01	02	04
Aspiration by inhalation and other means	01	01	01	03
Supplemental oxygen therapy	01	01	01	03
Suction	01	01	01	03
Trans-laryngeal Canola Ventilation	01	01	..	02
Cricothyrotomy	01	01	..	02
Techniques of helmet removal	01	01	01	03
Revision	03	..	..	03
Test	02	..	..	02
Total	**16**	**10**	**08**	**34**
F. TYPES OF TRAUMA: MECHANISMS OF INJURY				
Blunt Trauma	02	01	..	03
Collision injuries in different organs	02	01	..	03
Vehicular collision injuries	02	01	..	03
Penetrating traumas and fractures	02	02	..	04
Hemorrhage and shock	02	02	02	06
Soft tissue traumas	02	01	..	03
Burns	02	02	..	04
Head and facial traumas	02	01	..	03
Spinal traumas	02	01	..	03
Thoracic traumas	02	01	..	03
Abdominal traumas	02	01	..	03

*Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Muscular-skeletal traumas (including crush syndrome)	02	01	..	03
Revision	03	..	..	03
Test	02	..	..	02
Total	**29**	**15**	**02**	**46**
G. FRACTURES, HEAD AND SPINAL INJURIES				
Fractures	02	02	02	06
Head injury and spinal injury	02	02	..	04
Bandages and slings	02	03	03	08
Splinting mechanisms and procedures	02	02	03	07
Traction splints	01	01	02	04
Eye injuries	01	01	..	02
Revision	02	..	..	02
Test	02	..	..	02
Total	**14**	**11**	**10**	**35**
H. MEDICAL MANAGEMENT OF NUCLEAR, BIOLOGICAL AND CHEMICAL (NBC) EMERGENCIES				
NBC Emergencies – An overview	**02**	..	..	**02**
Nuclear / Radiological Emergencies:				
(a) Critical nuclear and radiological agents	02	01	..	03
(b) Injuries caused by nuclear / radiological agents and their management	02	02	..	04
(c) Measurement units for calculation of radiation doses: Dosimetric quantities	02	..	..	02

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
(d) Biological effects of radiation – video film	..	02	..	02
(e) Use of Beta and Gamma Contamination Monitors	01	..	02	03
(f) Radiological transport accidents	01	..	..	01
(g) Emergency response management including decontamination and mitigation	01	..	02	03
(h) Medical management of radiological emergencies	02	..	..	02
(i) Personal Protective Equipment	01	01	03	05
(j) Standard Operating Procedures for pre-hospital medical management of radiological emergencies	02	..	..	02
Total	**14**	**06**	**07**	**27**
Biological Emergencies				
(a) History and overview of biological warfare	01	01	..	02
(b) Modes of transmission of biological warfare agents	01	..	..	01
(c) Bacteria, viruses and toxins as biological warfare agents – their signs and symptoms	03	02	..	05
(d) Injuries caused by biological warfare agents and their management	02	02	..	04
(e) Detection of biological agents	01	01	..	
(f) Physical methods of protection – quarantine, decontamination, etc.	02	01	..	03
(g) Standard Operating Procedures for pre-hospital medical management of biological emergencies	02	..	..	02
Total	**12**	**07**	**..**	**19**

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Chemical Emergencies				
(a) Classification and characteristics of chemical agents of destruction	02	..	..	02
(b) Nerve agents (including their signs and symptoms)	02	..	..	02
(c) Blister agents (including their signs and symptoms)	02	..	..	02
(d) Injuries caused by chemical agents and their management	02	02	..	04
(e) Physical protection against chemical agents	02	..	..	02
(f) Personal protection and decontamination	02	02	..	04
(g) Standard Operating Procedures for pre-hospital medical management of chemical emergencies	02	..	..	02
Total	**14**	**04**	**..**	**18**
Revision : Nuclear / Radiological Biological Chemical	 03 02 02			 03 02 02
Tests	02	..	..	02
Grand Total – NBC Emergencies	**51**	**17**	**07**	**75**
I. **CARDILOGICAL ETC. EMERGENCIES**				
Heart attack	01	01	..	02
Basic cardiac life support	02	02	02	06
Dysarrytyimias and ECG	01	..	..	01

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Defibrillation: Indication – Contraindication	01	01	..	02
Automated External Defrilator (AED)	02	01	03	06
Neurological disorders	01	..	..	01
Epilepsy	01	01	..	02
Diabetes and endocrine disorders	02	..	..	02
Allergies and anaphylaxis	01	..	..	01
Gastro-enterological disorders	01	..	..	01
Urological disorders	01	..	..	01
Behavioural and psychiatric disorders	01	..	..	01
Pediatric emergencies	02	..	02	04
Geriatric emergencies	02	..	02	04
Revision	02	..	..	02
Test	01	..	..	01
Total	**22**	**06**	**09**	**37**
J. **OTHER COMMON MEDICAL EMERGENCIES**				
Drowning	02	01	02	05
Child-birth emergencies	02	01	02	05
Environmental exposure	01	..	..	01
Hypothermia	01	..	01	02
Hyperthermia	01	..	01	02
Poisoning and snake bite	02	02	..	04
Revision	02	..	..	02
Total	**11**	**04**	**06**	**21**

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
K. **PATIENT IMMOBILIZATION AND EXTRICATION**				
Cervical collars	01	01	..	02
Spinal immobilization	01	01	..	02
Rescue spine boards (long and short): Use in extrication	01	01	..	02
Stretchers – Scoop – Strokes – Jordan frame – Flaraguard	01	01	03	05
Motor vehicle extrication and spinal injury patient handling	02	01	02	05
Confined space access and extrication	01	01	01	03
Building access and introduction to special techniques of access	02	01	..	03
Heat & smoke tolerance training (Exposure of trainees to heat & smoke environment; Search & rescue in such environments).	01	..	02	03
Amputation – Preservation of severed parts	02	01	..	03
Revision	02	..	..	02
Test	03	..	..	03
Total	**17**	**08**	**08**	**33**
L. PATIENT MANAGEMENT				
Introduction to medical emergency packs	01	02	..	03
Emergency extrication equipment	01	02	..	03
Transportation of different types of casualties	01	01	02	04
Ambulance transportation	01	01	02	04
Transportation by helicopter	01	01	..	02

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Transportation by fixed wing aircrafts	01	01	..	02
Winching procedures	02	02	04	08
Pneumatic anti-shock garments	01	01	02	04
Medical anti-shock trousers	01	01	02	04
Revision	02	..	..	02
Test	03	..	..	03
Total	**15**	**12**	**12**	**39**
M. **COMMUNICATION DURING EMERGENCIES**				
Radio telephony procedures; How to speak on RT; Standard prowords; System of calling and answering; Establishing of communication, Changing of frequency; Time signals by RT; Signal strength.	02	01	02	05
Use of Morse Code (including practicals on receiving and sending messages)	01	01	04	06
Indian Wireless Radio Regulations	01	..	..	01
Mobile phone, satellite phone and internet service	01	01	02	04
Maintenance of communication record	01	..	01	02
Total	**06**	**03**	**09**	**18**
N. **SETTING UP OF AN EMERGENCY HOSPITAL AT DISASTER SITE**				
Basic infrastructure and equipment for an emergency hospital	01	01	..	02
Triage: Principles and objectives	01	01	..	02
Quick Medical Response Team	01	01	01	03
Evacuation of casualties	01	02	03	06

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Command and Control Cell	01	01	02	04
Reception and other arrangements for visitors	02	01	..	03
Total	**07**	**07**	**06**	**20**
O. BEHAVIOURAL SKILLS & PERSONAL DEVELOPMENT				
Communication skills	02	..	..	02
Inter-personal skills; Guidelines for clear inter-personal communication	04	..	..	04
Listening and empathy skills	02	..	..	02
Team skills – What makes a good team? Process skills for team building; Task orientation for teams; Motivating team members, Building processes of team skills.	04	..	..	04
Motivational skills – Motivation of self and others	02	..	..	02
Stress management	04	..	..	04
Health management	02	..	..	02
Total	**20**	**..**	**..**	**20**
P. INTERNSHIP AT LOKMANYA HOSPITAL TRAUMA CENTRE, NIGDI, PUNE OR ANY TRAUMA CENTRE RECOGNISED BY THE STATE				**2 Weeks**
Q. Submission of Course Reports and Feedback	06	..	..	06

* Through Mannequins / CDs, Video Films, etc

Subject	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Valediction	02	..	..	02
Spare periods	**08**			**08**
Grand Total	**305**	**120**	**121**	**546**

* Through Mannequins / CDs, Video Films, etc

ADVANCED COURSE IN MEDICAL FIRST RESPONSE (MFR)

(15 Working days)

LEVEL OF PARTICIPANTS

NDRF personnel, who have already undergone the 15-week Basic Training for para-medics and medical personnel and have secured more than 60% marks in the tests and assessment in that course.

OBJECTIVES

After undergoing this course, the participants should be able to:

- develop a good understanding of the emergency medical services system and disaster medicine as well as the various kinds of medical emergencies encountered in disaster situations;
- understand the concepts of critical incident planning with special reference to MFR, including the major steps, tactical considerations and integrated response concept;
- become fully familiar with the principles of patient assessment, triage and pre-hospital management of different types of traumas, injuries as well as the various medical emergencies encountered in different disaster situations, including nuclear, biological and chemical emergencies;
- develop good knowledge and skills in the various advanced techniques used in MFR operations including handling of the conventional as well as modern tools and equipment; and
- gain mastery in conducting MFR operations.

COURSE DURATION

1. Duration of the Course .. 15 Working days

2. Full working days .. 13

3. Half working days (Saturdays) .. 2

4. No. of periods in a working day .. 9

5. No. of periods in half-working days .. 6

6. Total no. of periods available .. 129

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(15 Working days)

Block Syllabus

Module	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
MFR – An overview	06	..	..	06
The Disaster Response Mechanism	15	01	..	16
Training Issues	07	..	..	07
MFR-related Advanced Inputs	37	19	18	74
Simulation Exercises	..	03	06	09
Report Writing	02	..	04	06
Course Evaluation & Feedback; Valediction	04	..	..	04
Spare periods	04	..	..	04
Total	**78**	**23**	**28**	**129**

* Including through Mannequins / CDs, Video films etc.

ADVANCED COURSE IN MEDICAL FIRST RESPONSE (MFR)

(15 Working days)

Detailed Syllabus

Inputs	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction – Purpose, objectives and methodology; Inauguration	03	..	..	03
MFR – An Overview				
The Emergency Medical Services System & Medical First Response	02	..	..	02
Pre-hospital treatment: Duties and responsibilities of Medical First Responders	02	..	..	02
MFR operation: Planning, organizing and implementing	02	..	..	02
The Disaster Response Mechanism				
Response policy and response machinery at local, District, State and Central levels	01	..	..	01
National Disaster Management Act; National Disaster Management Authority set up	02	..	..	02
Role of various stake-holders in Disaster Response with special reference to MFR • Police, Armed Forces and Civil Defence Volunteers • Civil Administration • NGOs & the community	02	..	..	02
Integrated Response Concept including ways and means to promote coordinated response	02	..	..	02
Critical Incident Planning with special reference to MFR – Major steps and tactical considerations	02	..	..	02

*Including through Mannequins / CDs, Video films etc.

Inputs	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

Inputs	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Incident Command System: Concepts, application and how it functions	02	01	..	03
Relevant Statutes, Manuals and Executive Instructions on Disaster Management issued by Government	02	..	..	02
Experience sharing: Ways and means to improve the effectiveness of response (Group Discussion)	02	..	..	02
Training Issues				
Conducting community awareness programmes on Medical First Response	02	..	..	02
Day-to-day training of individuals of NDRF teams in MFR	02	..	..	02
Day-to-day Team-level training in MFR	02	..	..	02
Sustainment of training	01	..	..	01
MFR-related Advanced Inputs				
Anatomical positions and reference points	01	01	..	02
Human body: Divisions, cavities and systems	01	01	..	02
Patient physical examination and assessment	01	02	..	03
Patient general care	02	..	..	02
Advanced cardio-vascular anatomy and physiology	02	01	01	04
Advanced cardiac physiology	01	01	..	02
Anatomy of the circulatory system; Steps for CPR; Complications of inadequate CPR	01	01	..	02
Electrical conduction system	01	..	..	01

*Including through Mannequins / CDs, Video films etc.

Inputs	Periods to be assigned			
	Theory	Demo*	Pract.	Total
ECG wave form recognition	01	..	..	01
Defibrillation with automatic electron defibrillator: Indications and contra-indications	01	01	..	02
Hypoxia	01	..	..	01
Intra-venous therapy / cannulation	01	01	01	03
Cannulation methods: Indications, contra-indications, complications	02	..	..	02
Fluid therapy: Uses, indications and contra-indications	01	01	01	03
Acid-base balance	01	..	..	01
Management of Chest Injuries	01	01	01	03
Suction	01	..	..	01
Oro-pharyngeal airway	01	..	01	02
Techniques of opening the airway; Rescue breathing,; Obstructed airway; Steps for clearing an airway	01	01	02	04
Oxygen therapy	01	01	01	03
Advanced trauma life support care	02	..	02	04
Kendrick Extrication Device (KED)	01	..	01	02
Spinal immobilization	01	..	01	02
Rescue spine boards (long and short) – their role in extrication	01	..	01	02
Motor vehicle extrication and handling of spinal injury patients	01	01	02	04
Transportation of injured victims and triage	01	..	02	03
Pneumatic Anti-Shock Garments (PASG) – Use, indications, contra-indications	01	..	01	02

*Including through Mannequins / CDs, Video films etc

Inputs	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Infectious Diseases – Precautions: Epidemiology of common infective agents; Modes of transmission; Signs and symptoms; Precautions for the responders	02	02	..	04
Advanced inputs on medical management of NBC emergencies and explosives	04	03	..	07
Simulation Exercises				
Three stations: ❖ Trauma ❖ Resuscitation ❖ Childbirth		 01 01 01	 02 02 02	 03 03 03
Report Writing	02	..	04	06
Course evaluation & feedback; Valediction	04	..	..	04
Spare periods	03	..	..	03
Total	**78**	**23**	**28**	**129**

* Including through Mannequins / CDs, Video films etc

TRAINING OF TRAINERS' COURSE IN MEDICAL FIRST RESPONSE (MFR)

(15 Working days)

LEVEL OF PARTICIPANTS

Those assigned as trainers in Medical First Response (MFR), in NDRF training institutions as well as Battalions. The participants should have undergone the 15-week Basic Training for medical personnel and para-medics, and should have secured at least 75% marks in tests and assessment in that course.

OBJECTIVES

After undergoing this course, the participants should be able to:

- understand, from a trainer's perspective, the basics of emergency medical response and disaster medicine, the principles of patient assessment, triage and pre-hospital management of different types of traumas, injuries as well as the various medical emergencies encountered in different disaster situations, and be able to explain the same to their trainees, including effectively handling their questions, doubts, etc.;

- acquire mastery over the handling and use of the various tools and equipment relating to MFR operations;

- develop the requisite 'direct trainer's skills' including an understanding of socio-psychological principles of adult learning;

- use individual-based as well as group-centered training methods and other training techniques such as role playing, simulation, etc.;

- prepare lesson plans and use training aids, such as transparencies, slides and power-point presentations; and

- perform as an effective trainer in training programmes on MFR.

COURSE DURATION

1. Duration of the Course .. 15 Working days

2. Full working days .. 13

3. Half working days (Saturdays) .. 2

4. No. of periods in a full working day .. 9

5. No. of periods in a half-working day .. 6

6. No. of periods available .. 129

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs. .. P.T. / Yoga

0900 – 0940 hrs. .. I Period
0940 – 1020 hrs. .. II Period
1020 – 1100 hrs. .. III Period

1100 – 1130 hrs. .. Tea Break

1130 – 1210 hrs. .. IV Period
1210 – 1250 hrs. .. V Period
1250 – 1330 hrs. .. VI Period

1330 – 1500 hrs. .. Lunch Break

1500 – 1540 hrs. .. VII Period
1540 – 1620 hrs. .. VIII Period

1620 – 1640 hrs. .. Tea Break

1640 – 1720 hrs. .. IX Period

1730 – 1830 hrs. .. Games

(15 Working days)

Block Syllabus

Modules	Periods to be assigned			
	Theory	**Demo***	**Pract**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
MFR-related Inputs**	24	27	11	62
Direct Trainers' Skills	28	06	23	57
Course Evaluation and Feedback; Valediction	03	..	..	03
Spare periods	04	..	..	04
Total	**62**	**33**	**34**	**129**

***** Including through Mannequins / CDs, Video films etc.

** These will include all important aspects of various medical inputs from a trainer's perspective

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	**03**	..	..	03
MFR-RELATED INPUTS				
Human Anatomy and Physiology; Cell structure; Tissue; Organ systems, Special senses	02	02	..	04
General Principles of Patho-physiology: Cellular physiology; Cellular injury and disease; Alternation in cells and tissues; Hypo perfusion	02	02	..	04
Techniques of Physical Examination: Physical examination – approach; Mental status; General survey of body and body parts; Anatomical regions; Physical examination of infants and children; Physical examination of elderly people; Hands-on working on dummies and mannequins	01	01	02	04
Patient Assessment: Scene size up and assessment; Patient assessment priorities; Focused history and physical examination of trauma patients; Rapid trauma physical examination; Care of medical versus trauma patients	01	01	02	04
Clinical Decision Making: Spectrum of pre-hospital care; Field application of assessment-based patient management; Principles of triage	01	01	02	04
Documentation: Importance of documentation; Records and Registers	01	01	01	03
Communication: Role of Paramedics in emergency medical communication	01	01	..	02

* Including through Mannequins / CDs, Video films etc.

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Trauma System: Mechanisms of Injury: Blunt trauma; Collision injuries; Penetrating trauma	02	02	..	04
Hemorrhage and Shock	01	02	..	03
Burns: Assessment of the burn patient; Steam burn injury; Chemical burn injury; Electrical burn injury; Radiation exposure	01	02	..	03
Trauma: Head and facial trauma; Evaluation of head injury; Spinal trauma; Thoracic trauma; Abdominal trauma; Musculo-skeletal trauma; Assessment of musculo-skeletal injuries	02	02	..	04
Fractures: Open fractures; Straightening angular fractures and reducing dislocation; Head injury and spinal injury; Splinting mechanisms and procedures; Hands-on working on dummies and mannequins	01	02	02	05
Pre-Hospital BTLS: Mass trauma and triaging; Primary evaluation – ABCD survey; Secondary ABCD survey; Airway management; Cervical spine immobilization; Basic slings & splints; Bandages; Skill stations and hands-on working on dummies and mannequins	02	02	02	06
Ambulance Operations: Checking the ambulance; Ambulance stationing; Safe ambulance operation; Aero-medical transportation	01	02	..	03
Medical Management of Nuclear, Biological and Chemical Emergencies: Nuclear and radiological emergencies and their effects; Biological emergencies and their effects; Critical biological agents; Methods of dissemination; Specific biological threats; Chemical emergencies and their effects; Specific chemical threats; Emergencies caused by explosives and their effects	05	04	..	09
Total	**24**	**27**	**11**	**62**

*Including through Mannequins / CDs, Video films etc.

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total
DIRECT TRAINERS' SKILLS				
Principles of Adult Learning: Definition of learning; Types of learning; Factors that influence adult learning; Individual differences in adult learning; Types of adult learners; Motivating the trainees; Maslow's Theory of Motivation	04	..	..	04
Communication skills	04	..	..	04
Presentation skills: Principles of receptive communication; Elements of effective presentations; How to plan and prepare effective presentations	04	02	..	06
Audio-visual aids Need for audio-visual aids; Familiarization with audio-visual aids; Advantages and disadvantages of various audio-visual aids; Standard formats for preparing transparencies, slides, flip charts and power-point presentations	02	02	04	08
Various Methods of Instruction: Steps of interactive-lecture, presentation and demonstration practice method; Role playing method; Simulation Exercises; Group discussion	04		04	08
Planning a lesson Importance of planning a lesson; Planning formats in interactive-lecture method and demonstration-practice method; Different criteria of sequencing.	04	..	04	08
Course coordination: Importance and steps involved in preparation for the Course; Role and duties of Course Coordinator	02	..	..	02
Planning, organizing and conducting of mock drills	..	02	02	04

*Including through Mannequins / CDs, Video films etc.

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Testing and Evaluation of Training: What, why, when and how to test; Test validity and reliability; Various methods of evaluation of training.	04	..	..	04
Individual Presentations (Practical) : Testing of participants for individual lectures and presentations (Videograph – Feedback – Repeat)	..	..	09	09
Total	**28**	**06**	**23**	**57**
Course Feedback & Valediction	03	..	..	03
Spare periods	04	..	..	04
Grand Total	**62**	**33**	**34**	**129**

* Including through Mannequins / CDs, Video films etc.

MASTER TRAINERS' COURSE IN MEDICAL FIRST RSPONSE (MFR)

(2 Weeks)

LEVEL OF PARTICIPANTS

NDRF personnel, who have already undergone (i) the 15-week Basic Training for medical personnel and para-medics, (ii) the Advanced Course in MFR, and (iii) Training of Trainers' Course in MFR, and have been assessed as outstanding in all these courses.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- develop full understanding, from a trainer's perspective, of the conventional as well as emerging concepts, techniques and methodology of MFR, and to explain the same to the trainees and others, including effectively handling their questions, doubts, etc.;

- have a good conceptual understanding of the modern concepts of training, including socio-psychological aspects of training and principles of adult learning;

- develop mastery in various individualized and group centered methods of training as well as in the use of various training aids;

- fully understand the principles and methodologies of management of training, including development of resource material, course coordination, class room management, tools and techniques of testing and evaluation of training, etc.; and

- independently design and implement need-based training programmes in MFR.

COURSE DURATION

1.	Duration of the Course	.. 2 weeks (14 days)
2.	Sundays	.. 2
3.	No. of working days available	.. 12
4.	Full working days	.. 10
5.	Half working days (Saturdays)	.. 2
6.	No. of periods in a working day	.. 9
7.	No. of periods in a half-working day	.. 6
8.	No. of periods available	.. 102

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(**2 Weeks)**

Block Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
Disaster Response with special reference to MFR	05	01	01	07
MFR-related Inputs	20	13	06	39
Advanced Inputs on Instructional Aspects	17	10	20	47
Course Feedback & Evaluation; Valediction	03	..	..	03
Spare periods	03	..	..	03
Total	**51**	**24**	**27**	**102**

* Including through Mannequins / CDs, Video films etc

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	03	..	..	03
Disaster Response with special reference to MFR				
Integrated Response Concept including ways and means to promote coordinated response	02	..	..	02
Critical Incident Planning with special reference to MFR – Major steps and tactical considerations	02	..	..	02
Concept of operational safety; Safety rules; Safety considerations in a MFR operation	01	01	01	03
Advanced MFR-related Inputs				
Patient physical examination and assessment skills	01	02	..	03
Patient general care skills	01	01	..	02
Advanced cardiovascular anatomy and physiology	02	01	..	03
CPR; Complications of inadequate CPR	01	01	..	02
Defibrillation with automatic electron defibrillator: Indications and contra-indications	01	01	..	02
Intravenous therapy / cannulation	01	01	..	02
Cannulation methods: Indications, contradictions, complications	02	..	..	02

* Including through Mannequins / CDs, Video films etc.

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Fluid therapy: Uses, indications and contra-indications	01	01	..	02
Oro-pharyngeal airway	01	..	..	01
Techniques of opening the airway; Rescue breathing; Obstructed airway; Steps for clearing an airway	01	01	01	03
Advanced Trauma Life Support care	01	..	02	03
Kendrick Extrication Device (KED)	01	..	01	02
Management of victims with spinal injuries	01	01	01	03
Pneumatic Anti-Shock Garments (PASG) – Use, indications, contra-indications	01	..	01	02
Infectious diseases – Precautions: Epidemiology of common infective agents; Mode of transmission; Signs and symptoms; Precautions for the responders	02	01	..	03
Advanced inputs on medical management of victims of NBC emergencies and explosives	02	02	..	04
Inputs on Instructional Aspects				
Planning a lesson: Importance of planning a lesson; planning formats in interactive-lecture method and demonstration-practice method	02	02	02	06
Method of instruction: Adult learning; Audience characteristics; Various instructional methods and techniques; Class participation	03	02	03	08
Course coordination: Importance and steps involved in preparing for a course; Role and functions of course coordinator	02	02	02	06

* Including through Mannequins / CDs, Video films etc.

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Development of Training Material: Development, adaptation and translation of training material relevant to the local context.	02	02	..	04
Planning, organizing and conducting of Mock Drills	02	02	04	08
Class Room management: Principles of class room management.	02	..	..	02
Tools and Techniques of Testing and Evaluation of Training: Training needs analysis, test validity and reliability.	04			04
Individual Presentations: Testing of participants for individual lectures and presentations (Videograph – Feedback – Repeat)	..	..	09	09
Course Feedback & Evaluation; Valediction	03	..	..	03
Spare periods	03	..		03
Total	**51**	**24**	**27**	**102**

* Including through Mannequins / CDs, Video films etc

ADDITIONAL NBC MODULE FOR BASIC TRAINING OF FIRST RESPONDERS OF NBC BATTALIONS OF NDRF

(4 Weeks)

LEVEL OF PARTICIPANTS

All members of the emergency response teams (irrespective of ranks) and all supervisory officers, of NBC Battalions of NDRF.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- Lean the causes of, and the nature of threats caused by, nuclear, biological and chemical disasters;
- develop an understanding of the nature and sources of radiological threat, its detection and monitoring, radiological dispersal devices, and emergency response to the same;
- become familiar with the principles of handling and transportation of radioactive material, and of radiological waste management;
- acquire basic knowledge of the concepts and methodologies of dealing with radiological emergencies, including decontamination and mitigation as also the medical aspects, including the pre-hospital medical management of radiological emergencies;
- understand the nature of biological hazards and different biological warfare agents causing diseases, their characteristics, signs and symptoms and treatment, decontamination and physical methods of protection against them;
- acquire knowledge of different types of chemical warfare agents and other hazardous chemicals, their detection, decontamination and methods of physical protection against the same; and
- gain full knowledge and understanding of the standard operating procedures for dealing with different radiological, biological and chemical emergencies, and be able to follow the same with confidence, as and when required.

COURSE DURATION

1.	Duration of the Course	.. 4 weeks (28 days)
3.	Sundays (4), Second Saturdays (1) and Holidays (1)	.. 6
3.	No. of working days available (28 - 6)	.. 22
4.	Full working days	.. 18
5.	Half working days (Saturdays)	.. 4
6.	No. of periods in a working day	.. 9
7.	No. of periods in half-working days	.. 6
8.	No. of periods available	.. 186

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

ADDITIONAL NBC MODULE FOR BASIC TRAINING OF FIRST RESPONDERS OF NBC BATTALIONS OF NDRF

(4 Weeks)

Block Syllabus

Modules	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Course Introduction – Objectives, methodology, etc.	02	..	..	02
Broad overview of Weapons of Mass Destruction	02	..	..	02
NBC – Definitions & Terminology	02	..	..	02
Radiological Emergency	46	10	32	88
Biological Emergency	24	03	04	31
Chemical Emergency	31	09	05	45
Communication in NBC Scenario	02	..	..	02
Mock Drill & Debriefing	03	02	06	11
Course Evaluation and feedback	03	..	..	03
Total	**115**	**24**	**47**	**186**

*Including through CDs, Video films etc., where available

ADDITIONAL NBC MODULE FOR BASIC TRAINING OF FIRST RESPONDERS OF NBC BATTALIONS OF NDRF

(4 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Introduction – Objectives, purpose and methodology of the course	02	..	..	02
Brief overview of Weapons of Mass Destruction	02	..	..	02
NBC – Definitions and Terminology	02	..	..	02
WEAPONS OF MASS DESTRUCTION - RADIOLOGICAL EMERGENCY				
Basic Nuclear Physics	02	..	..	02
Phenomenon of nuclear explosion	01	..	..	01
Types of burst and their characteristics	01	..	..	01
Effects of nuclear explosion	02	..	..	02
Measurement units for calculation of radiation doses	02	..	..	02
Dosimetric quantities	01	..	..	01
Practical aspects of meteorology in NBC protection: Effects of weather and terrain	01	..	01	02
Effect of time, distance and shielding on exposure	02	..	..	02
Practicals on concept of time, distance and shielding in radiation protection	..	..	02	02
Different types of detection and monitoring equipment; Practicals on use of GM Survey Meter and Alpha contamination monitors	01	02	04	07

* Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Biological effects of radiation – Video film	..	02	..	02
Concepts of personal monitoring, Use of DRD, TLD and Electronic Dosimeters	02	..	..	02
Practicals on use of Teletector Dosimeters	..	..	02	02
Practicals on use of Beta and Gamma Contamination Monitors	..	..	02	02
Survivability of communication in nuclear environment	02	..	..	02
Practicals on dose measurement using TLD, DRD and Electronic Dosimeter	..	..	02	02
Mobile radiation monitoring equipment	02	..	..	02
Recce, monitoring and survey	02	..	02	04
Overview of nuclear facilities in India & elsewhere	01	..	..	01
Various sources and their applications and handling	02	..	..	02
Transportation of radio active material	01	..	..	01
Managing radiological transport accidents	01	..	..	01
Radiological dispersal devices	01	..	..	01
Emergency response for RDD, including marking of contaminated area	02	..	..	02
Effects of nuclear weapons on Hiroshima & Nagasaki	..	02	..	02
Case studies of radiological disasters, including vehicle accidents carrying radioactive material	03	..	..	03
Radiological terrorism / nuclear strike	01	..	..	01

* Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Response / emergency management, including decontamination and mitigation	04	..	..	04
Various items of Personal Protective Equipment (PPE)	01	..	02	03
Medical management of radiological emergencies	02	..	..	02
Source search exercise – Video film	..	02	..	02
Exposure guidelines for first responders	01	..	..	01
Survival drills	02	02	02	06
Principles of radiological waste management	01	..	..	01
Repeat practicals on use of radiation detecting equipment	..	..	02	02
On-site controller response: Mock drills with active participation of trainees on: (a) Search of orphan radioactive source (b) Establishment of decontamination station and decontamination of vehicle personnel and equipment (c) Use of PPE	. .. .	.. .. ..	02 02 02	02 02 02
Outdoor exercise (simulation exercise) on radiological dispersal devices	..	..	05	05
De-briefing on simulation exercise	02	..	..	02
Total	**46**	**10**	**32**	**88**

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

BIOLOGICAL EMERGENCY

History and overview of biological warfare agents (BWAs)	02	..	..	02
Bacteria, viruses and toxins and BWA	02	..	..	02
Difference between natural diseases and those caused by BWAs; Possible indicators of a BWA	01	..	..	01
Signs and symptoms of effects of BWA – Bacteria, Viruses, Ricketicia & Fungi	03	..	..	03
Signs and symptoms of BWA toxins	02	..	..	02
Mode of transmission of BWAs	02	..	..	02
Detection of BWAs	02	..	..	02
Assessment of scene	01	..	..	01
Practical detection methods (Kit-based)	..	..	02	02
Medical protection methods	02	..	02	04
Prophylaxis and treatment of diseases caused by BWAs	02	..	..	02
Physical methods of protection	01	01	..	02
Protection – quarantine	01	..	..	01
Decontamination	01	..	..	01
Practical on D-con (Physical Protection Kit)	..	02	..	02
Standard Operating Procedures for dealing with biological emergencies	02	..	..	02
Total	**24**	**03**	**04**	**31**

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

CHEMICAL EMERGENCY

Introduction to chemical warfare agents (CWAs) and hazardous chemicals	01	..	..	01
Definition of CWA	01	..	..	01
Threat perception of CWA, convention on CWA	01	..	..	01
Classification and characteristics of CWA	02	..	..	02
Physical and chemical properties of CWA	02	..	..	02
Nerve agents	02	..	..	02
Blister agents and other CWAs	02	..	..	02
Signs and symptoms of nerve agents	01	..	..	01
Signs and symptoms of other CWAs	02	..	..	02
Hazardous chemicals used in industries (including case study of Bhopal Gas Tragedy)	02	01	..	03
Transportation of hazardous chemicals	01	..	..	01
Detection : Part-1 (chemical based)	01	01	..	02
Detection : Part -2 (instrument based)	01	01	01	03
Practical on detection of nerve agents – three color detector paper, detector tubes, AP2C & RVD	01	02	..	03
Physical protection against CWA	01	02	..	03
Decontamination: Part-1 (Principles and procedures)	02	..	..	02
Practical session on Personal Protection Equipment (PPE)	..	..	02	02

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Decontamination: Part-2 (Contamination avoidance and triage)	02	..	..	02
Personal decontamination kit	..	..	02	02
Practicals on decontamination – PDK1, PDK2, DS2	..	01	..	01
Delivery of CWA and their dispersal	01	..	..	01
Basics on collection of samples / evidence from site and preservation of scene	02	01	..	03
Management of chemical emergencies	02	..	..	02
Standard Operating Procedures for dealing with chemical emergencies	01			01
Total	**31**	**09**	**05**	**45**
Establishing communication in NBC scenario and special problems	02	..	..	02
Mock Drill	01	02	06	09
Debriefing	02	..	..	02
Course Evaluation and Feedback	03	..	..	03
Grand Total	**115**	**24**	**47**	**186**

* Including CDs, Video films etc., where available

ADVANCED COURSE IN THE RESPONSE TO NUCLEAR, BIOLOGICAL & CHEMICAL (NBC) EMERGENCIES

(2 Weeks)

LEVEL OF PARTICIPANTS

NDRF Personnel of NBC Battalions who have already undergone the Basic Training for First Responders (including the 4-week Additional NBC Module) and have secured more than 60% marks in the tests and assessment in that course.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- fully understand the various elements and phases of disaster response operations in the wake of NBC emergencies, and planning, organizing, coordinating and implementing the same;
- develop a good understanding of the concepts of critical incident planning with special reference to NBC emergencies, including the major steps, tactical considerations and integrated response concept;
- become familiar with the concepts and functioning of the Incident Command System;
- develop good knowledge and skills in the various advanced techniques used in disaster response operations in the wake of NBC emergencies including handling of conventional as well as modern tools and equipment; and
- develop full confidence in organizing a response in the wake of any NBC emergency.

COURSE DURATION

1.	Duration of the Course	.. 2 weeks (14 days)
4.	Sundays	.. 2
3.	No. of working days available	.. 12
4.	Full working days	.. 10
5.	Half working days (Saturdays)	.. 2
6.	No. of periods in a working day	.. 9
7.	No. of periods in half-working days	.. 6
8.	No. of periods available	.. 102

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga / Swimming
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(2 Weeks)

Block Syllabus

Module	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
Weapons of Mass Destruction – An Overview	06	..	..	06
The Disaster Response Mechanism	15	01	..	16
The NBC Response Elements	11	..	2	13
Training Issues	07	..	..	07
NBC-related Advanced Inputs	26	10	05	41
Legal Aspects	04	..	..	04
Report Writing	02	..	04	06
Course Evaluation & Feedback; Valediction	03	..	..	03
Spare periods	03	..	..	03
Total	**80**	**11**	**11**	**102**

* Including through CDs, Video films etc., where available

(2 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	03	..	..	03
Weapons of Mass Destruction – An Overview				
Introduction to Weapons of Mass Destruction (WMD)	02	..	..	02
Threat of WMD	02	..	..	02
Counter-measures against WMD – Planning and operational concepts	02	..	..	02
The Disaster Response Mechanism				
Response policy and response machinery at local, District, State and Central levels	01	..	..	01
National Disaster Management Act; National Disaster Management Authority set up	02	..	..	02
Role of various stake-holders in Disaster Response with special reference to Nuclear, Biological and Chemical Emergencies • Police, Armed Forces and Civil Defence Volunteers • Civil Administration • NGOs & the community	02	..	..	02
Integrated Response Concept including ways and means to promote coordinated response	02	..	..	02
Critical Incident Planning with special reference to NBC Emergencies - Major steps and tactical considerations	02	..	..	02

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

Topics	Periods to be assigned			
	Theory	Demo*	Pract.	Total
Incident Command System: Concepts, application and how it functions	02	01	..	03
Relevant Statutes, Manuals and Executive Instructions on Disaster Management issued by Government	02	..	..	02
Experience sharing: Ways and means to improve the effectiveness of response (Group Discussion)	02	..	..	02
The NBC Response Elements				
Rapid assessment and initial detection elements	02	..	..	02
Information and planning elements	01	..	..	01
NBC reconnaissance elements	02	..	..	02
NBC medical response / triage elements	02	..	02	04
Security and public order issues	02	..	..	02
Communications / transportation issues	02	..		02
Training issues				
Conducting community awareness programmes on NBC emergencies	02	..	..	02
Day-to-day team level training in NBC response	02	..	..	02
Day-to-day training of individuals in NBC response teams	02	..	..	02
Sustainment of training	01	..	..	01
NBC-related Advanced Inputs				
Nuclear emergencies – Theoretical aspects	04	..	..	04
Biological emergencies – Theoretical aspects	02	..	..	02
Chemical emergencies – Theoretical aspects	03	..	..	03

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Case studies & analysis:				
Nuclear emergencies	02	02	..	04
Biological emergencies	02	01	..	03
Chemical emergencies	02	02	..	04
Panel discussions on selected NBC-related themes	05	..	..	05
Equipment-related Inputs:				
Rapid assessment and initial detection equipment	01	02	01	04
Decontamination equipment	02	01	01	04
Reconnaissance equipment	01	..	01	02
Triage and medical response equipment	..	02	..	02
Communication equipment	01	..	02	03
Other equipment	01	..	..	01
Legal Aspects				
National and international legal statutes / conventions, including CWC & BWC, relating to WMD	04	..	..	04
Report Writing	02	..	04	06
Course Evaluation and Feedback	03	..	..	03
Spare periods	03	..	..	03
Total	**80**	**11**	**11**	**102**

* Including through CDs, Video films etc., where available

TRAINING OF TRAINERS COURSE IN THE RESPONSE TO NUCLEAR, BIOLOGICAL & CHEMICAL (NBC) EMERGENCIES

(2 Weeks)

LEVEL OF PARTICIPANTS

Those assigned the job of imparting training in NBC inputs in NDRF training institutions as well as Battalions. The participants should have undergone the 12-week Basic Course for First Responders as well as the 4-week Additional NBC Module for the personnel of NBC Battalions, and should have secured at least 75% marks in tests and assessments in both the courses.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- understand, from a trainer's perspective, the causes and the nature of threats caused by nuclear, biological and chemical disasters, as also the various aspects of management of NBC emergencies, and be able to explain the same to the trainees, including effectively handling their questions, doubts, etc.;
- acquire mastery over the handling and use of the various equipment and tools relating to response to NBC emergencies;
- develop the requisite 'direct trainer's skills' including having an understanding of the socio-psychological principles of adult learning;
- use individual-based as well as group-centered training methods and other training methodologies such as role playing, simulation, etc.;
- prepare lesson plans and use training aids, such as transparencies, slides and power-point presentations; and
- perform as an effective trainer in training programmes on NBC emergencies.

COURSE DURATION

1.	Duration of the Course	.. 2 weeks (14 days)
5.	Sundays	.. 2
3.	No. of working days available	.. 12
4.	Full working days	.. 10
5.	Half working days (Saturdays)	.. 2
6.	No. of periods in a working day	.. 9
7.	No. of periods in a half-working day	.. 6
8.	No. of periods available	.. 102

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga / Swimming
0900 – 0940 hrs.	.. I Period
0940 – 1020 hrs	.. II Period
1020 – 1100 hrs.	.. III Period
1100 – 1130 hrs.	.. Tea Break
1130 – 1210 hrs.	.. IV Period
1210 – 1250 hrs.	.. V Period
1250 – 1330 hrs.	.. VI Period
1330 – 1500 hrs.	.. Lunch Break
1500 – 1540 hrs.	.. VII Period
1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(2 Weeks)

Block Syllabus

Modules	Periods to be assigned			
	Theory	**Demo***	**Pract**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
NBC-related Inputs**				
Radiological Emergencies	10	02	03	15
Biological Emergencies	07	01		08
Chemical Emergencies	08	01	02	11
Latest Trends in Technological Advancement in NBC	02	..	..	02
Direct Trainers' Skills	28	06	23	57
Course feedback & Valediction	03	..	..	03
Spare periods	03	..	..	03
Total	**64**	**10**	**28**	**102**

* Including through CDs, Video films etc., where available

**These will include all important aspects relating to NBC emergencies from a trainer's perspective

(2 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	**03**	..	..	**03**
NBC-RELATED INPUTS				
Radiological Emergencies				
Basic nuclear physics	02	..	..	02
Nuclear explosion phenomenon and different types of radiation	02	..	..	02
Nuclear terrorism and other radiological threats	01	…	..	01
Protection against radiation including effects of time, distance and shielding	02	..	..	02
Radiological Dispersal Devices (RDDs)	01	01	..	02
Detection and monitoring equipment	01	01	01	03
Contamination and decontamination procedures	01	..	02	03
Total	**10**	**02**	**03**	**15**
Biological Emergencies				
Biological threats	01	..	..	01
Terrorist use of biological agents; Recognition of biological hazards	01	..	…	01
Health effects of bio-hazards	02	..	..	02
Biological agents detection and sampling	01	..	..	01

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Bio-defence measures	01	..	..	01
Decontamination procedures	01	01	..	02
Total	**07**	**01**	**..**	**08**
Chemical Emergencies				
Threat from and identification of hazardous chemicals / chemical warfare agents (CWAs)	02	..	..	02
Health effects of hazardous chemicals / CWAs	02	..	..	02
Confinement and containment of hazardous chemicals	01	..	..	01
Medical intervention	01	..	..	01
Chemical detection instruments	01	01	..	02
Decontamination procedures	01	..	02	03
Total	**08**	**01**	**02**	**11**
Latest Trends in technological advancement in NBC	**02**	..	..	02
DIRECT TRAINERS' SKILLS				
Principles of Adult Learning: Definition of learning; Types of learning; Factors that influence adult learning; Individual differences in adult learning; Types of adult learners; Motivating the Trainees: Maslow's Theory of Motivation	04	..	..	04
Communication skills	04	..	..	04
Presentation skills: Principles of receptive communication; Elements of effective presentations; How to plan and prepare effective presentations	04	02	..	06

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Audio-visual aids Need for audio-visual aids; Familiarization with audio-visual aids; Advantages and disadvantages of various audio-visual aids; Standard formats for preparing transparencies, slides, flip charts and power-point presentations.	02	02	04	08
Various Methods of Instruction: Steps of interactive-lecture presentation and demonstration-practice method; Role playing method; Simulation exercises; Group discussion	04	..	04	08
Planning a lesson Importance of planning a lesson; Planning formats in interactive-lecture method and demonstration-practice method; Different criteria of sequencing.	04	..	04	08
Course coordination: Importance and steps involved in preparation for a Course; Role and duties of Course Coordinator	02	..	..	02
Planning, organizing and conducting of mock drills	..	02	02	04
Testing and Evaluation of Training: What, why, when and how to test; Test validity and reliability; Various methods of evaluation of training.	04	..	..	04
Individual Presentations (Practical) : Testing of participants for individual lectures and presentations (Videograph – Feedback – Repeat)	..	..	09	09
Total	**28**	**06**	**23**	**57**
Course Evaluation and Feedback; Valediction	**03**	**..**	**..**	**03**
Spare periods	**03**	**..**	**..**	**03**
Total	**64**	**10**	**28**	**102**

* Including through CDs, Video films etc., where available

MASTER TRAINERS' COURSE IN THE RESPONSE TO NUCLEAR, BIOLOGICAL & CHEMICAL (NBC) EMERGENCIES

(2 Weeks)

LEVEL OF PARTICIPANTS

NDRF personnel, who have already undergone (i) the Basic Training Course for First Responders, (ii) the Additional NBC Module for Basic Training of First Responders of NBC Battalions, (iii) the Advanced Course in NBC, and (iv) the Training of Trainers' Course in NBC, having been assessed as outstanding in all these courses.

OBJECTIVES

After undergoing this training course, the participants should be able to:

- develop full understanding, from a trainer's perspective, of the conventional as well as emerging concepts, techniques and methodology of response to NBC emergencies, and to explain the same to the trainees and others, including effectively handling their questions, doubts, etc.;
- have a good conceptual understanding of the modern concepts of training, including socio-psychological aspects of training and principles of adult learning;
- develop mastery in various individualized and group centered methods of training as well as in the use of various training aids;
- fully understand the principles and methodologies of management of training, including development of resource material, course coordination, class room management, tools and techniques of testing and evaluation of training, etc.; and
- independently design and implement need-based training programmes in response to NBC emergencies.

COURSE DURATION

1.	Duration of the Course	.. 2 weeks (14 days)
6.	Sundays	.. 2
3.	No. of working days available	.. 12
4.	Full working days	.. 10
5.	Half working days (Saturdays)	.. 2
6.	No. of periods in a working day	.. 9
7.	No. of periods in half-working days	.. 6
8.	No. of periods available	.. 102

SUGGESTED DAILY SCHEDULE

0630 – 0730 hrs.	.. P.T. / Yoga / Swimming
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1540 – 1620 hrs.	.. VIII Period
1620 – 1640 hrs.	.. Tea Break
1640 – 1720 hrs.	.. IX Period
1730 – 1830 hrs.	.. Games

(2 Weeks)

Block Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course Introduction; Inauguration	03	..	..	03
Disaster Response with special reference to NBC Emergencies	08	01		09
NBC Emergencies-related Advanced Inputs	27	07	06	40
Advanced Inputs on Instructional Aspects	14	10	20	44
Course Feedback & Evaluation; Valediction	03	..	..	03
Spare periods	03	..	..	03
Total	**58**	**18**	**26**	**102**

* Including through CDs, Video films etc., where available

(2 Weeks)

Detailed Syllabus

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Registration of participants; Course introduction – Purpose, objectives and methodology; Inauguration	03	..	..	03
Disaster Response with special reference to NBC Emergencies				
Integrated Response Concept including ways and means to promote coordinated response	02	..	..	02
Critical Incident Planning with special reference to NBC – Major steps and tactical considerations	02	..	..	02
Incident Command System: Concepts, application and how it functions; Development of response in complex scenarios	02	01	..	03
General principles of assessment of an incident / overview of incident	02	..	..	02
NBC-related Advanced Inputs				
An overview of NBC Emergencies and threat perception	02	..	..	02
NBC recce, monitoring and survey; Meteorological issues	01	01	..	02
NBC hazard prediction	01	01	..	02
Nuclear explosion phenomenon and its effects	02	..	..	02
Dosimetric considerations; Radiological detection instruments: Principles and functioning	01	01	..	02

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Radiological dispersal devices (RDDs)	01	..	..	01
Emergency radiation response teams: Tasks and responsibilities	01	..	..	01
Biological warfare: An overview and threat perception	01	..	..	01
Biological agents (including toxins): Classification and characteristics and diseases caused	02	..	..	02
Possible indicators of deliberate BWA attacks	01	..	..	01
Classification and types of chemical agents and their characteristics	02	..	..	02
Chemical agents detection equipment: Principles and functioning	01	..	01	02
Hazardous chemicals used in industries; Accidents involving hazardous chemicals and their transportation	01	01	..	02
Triage and casualty management in NBC Emergencies	01	01	01	03
Principles of decontamination	01	..	..	01
Establishment of personnel and vehicle contamination stations	..	..	02	02
Planning and organizing survival drills for NBC emergency responders	..	..	02	02
Standard operating procedures (SOPs) for NBC Emergencies	04	..	..	04
Case studies of major NBC emergency situations and their analysis	04	..	..	04
Classical video films on NBC emergencies	..	02	..	02

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Inputs on Instructional Aspects				
Planning a lesson: Importance of planning a lesson; planning formats in interactive-lecture method and demonstration-practice method	01	02	02	05
Method of instruction: Adult learning; Audience characteristics; Various instructional methods and techniques; Class participation	02	02	03	07
Course coordination: Importance and steps involved in preparing for a course; Role and functions of course coordinator	02	02	02	06
Development of Training Material : Development, adaptation and translation of training material relevant to the local context.	02	02	..	04
Planning, organizing and conducting of Mock Drills	02	02	04	08
Class Room management: Principles of class room management.	02	..	..	02
Tools and techniques of testing and evaluation of training: Training needs analysis, test validity and reliability.	03	..	..	03
Individual Presentations: Testing of participants for individual lectures and presentations (Videograph – Feedback – Repeat)	..	..	09	09

*Including through CDs, Video films etc., where available

Topics	Periods to be assigned			
	Theory	**Demo***	**Pract.**	**Total**
Course Feedback & Evaluation; Valediction	03	..	..	03
Spare periods	03	..		03
Total	**58**	**18**	**26**	**102**

* Including through CDs, Video films etc., where available