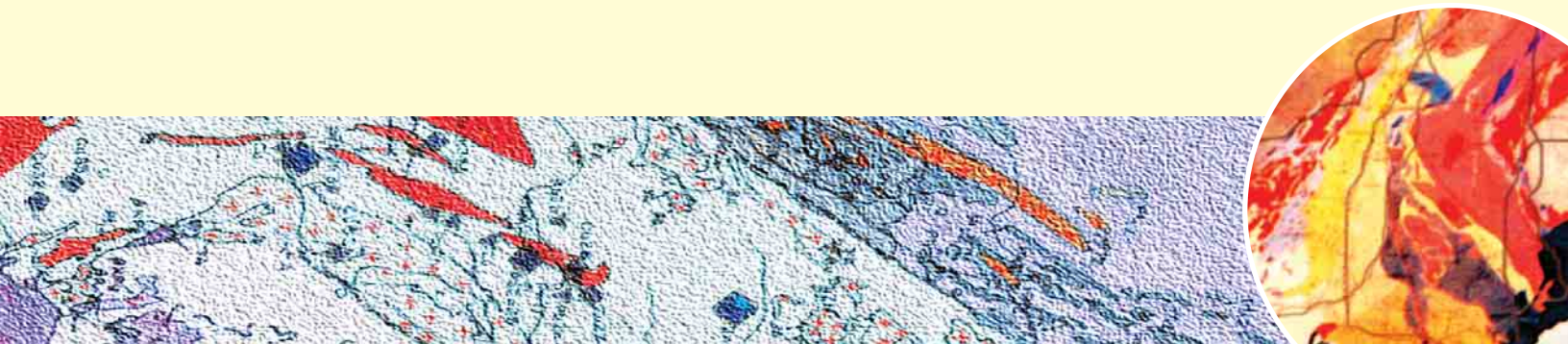


**TRAINING &
CAPACITY BUILDING**



11.1.0. Training in GSI:

11.1.1. The need for training and knowledge transfer has assumed critical importance in the present scenario of rapid scientific and technological advances taking place in the field of geoscience. Attendant changes in approach and methodologies especially with the availability of numerous computer based applications has added to the pressure to keep up with latest developments. It is, therefore, imperative to develop a dynamic training policy in consonance with the changing geoscience context, to create the necessary pool of expertise in order to sustain strategic goals to achieve the Vision and Charter set for GSI in Chapter-VI. The Government of India considers Training as a vital Human Resource Development mechanism and therefore has formulated a 'National Training Policy'. The executive summary of the 'National Training Policy' is provided as *Annexure-XI.I*. The Committee recommends that Training Policy should be in broad conformity with the National Training Policy.

11.1.2. Training services, particularly in the geoscience sector are useful in the following contexts: -

- Meeting the gap between academic knowledge and field practices, particularly of newly inducted geoscientists, to create efficiency.
- Knowledge enhancement by exposing practicing geoscientists to new developments in fields related to their specialization, to create excellence.
- Knowledge pooling by enabling direct or indirect interaction amongst related fields, to create synergy.
- Human resource development related to attitudinal issues, cooperative behaviour, goal-orientation, quality consciousness, etc., to create esprit-de-corps.

11.1.3. As such, 'capacity building' and 'knowledge sharing' rather than training would perhaps be a better description of what is intended and the following paragraphs set out the framework not only in respect of GSI's own resources, but also of other stakeholders of the geoscientific sector:- Central and State Government institutions, private sector institutions, academic and research institutions, etc.

As has been brought out in Chapter VII, the National Mineral Policy 2008 has also stressed on the need for a comprehensive institutional framework for R&D and Training as follows:-

“To enable the use of state of the art exploration techniques, scientific mining and optimal use of minerals through ore dressing and beneficiation technologies it is necessary not only to promote research and development in minerals but to simultaneously establish appropriate educational and training facilities for human resources development to meet the manpower requirements of the mineral industry. These matters will receive prime importance and a comprehensive institutional framework for Research & Development, and Training will be developed” - (Para 2.7 of NMP, 2008).

11.1.4. Presently the training needs of GSI, and other Institutions to some extent, are met by the Geological Survey of India Training Institute (GSITI) established in 1976. GSITI has its main training centre at Hyderabad. The Institute has specialized divisions such as Photo Geology and Remote Sensing



(PGRS), Geophysics, and the Centre for GeoInformation Management Training (CGMT), all located at Hyderabad. The training modules are designed with focus on fundamentals and applied aspects of geoscience viz., Geology, Geophysics, Geochemistry, Natural Hazards, Remote Sensing and Geoinformatics for Disaster Management and DST sponsored training courses to cater to the needs of the Universities (faculty members and research scholars), sister organizations and other outside agencies.

11.1.5. The Institute has six Field Training Centres, which are specialized in respect of the local geology. These Centres are operationalised only for the purpose of induction training of GSI's newly recruited geologists, and the faculty is organized for each centre from amongst 5-6 experienced Directors or Senior Geologists from the Regions. The trainees are divided into small batches of 5 to 6 members each batch is taken to the field by a faculty member who supervises their work as they do survey and mapping. Since the art of mapping is being handed down in a personalized way, GSI has been extremely careful in selecting Directors and Senior Geologists with knowledge and aptitude. GSI is also concerned about the possible dilution of quality particularly of the field training in geological survey and mapping (as well as in geochemical or geophysical studies or mineral exploration) in case of sudden increase in the numbers of trainees, and also since this may create extreme stress in Regions who may be hard pressed to release so many experienced and knowledgeable Director or Senior Geologist level officers at one go.

11.1.6. The present sanctioned and filled in strength in GSITI at the Institute and Field Training centres is given in Table-XI. 1.

Table – XI. 1

GSI Training Institute: Present Strength

Sl.No.	Centre/Location	Designation	Strength	
			Created	Filled in*
A.1	Hyderabad T.I.	DDG	01	01
A.2		Dir. (Tech. Cdn.)	01	01
A.3		Geologist (Sr.)	04	04
A.4		STA	01	01
B.1	CGMT, Hyderabad	Director	01	-
B.2		Geologist (Sr.)	03	03
C.1	Geophysics, Hyderabad	Director	01	01
C.2		Geophysicist (Sr.)	01	01
D.1	PGRS, Hyderabad	Director	01	-
D.2		Geologist (Sr.)	02	02
E.1	Hyderabad Centre	Director	01	01
E.2		Geologist (Sr.)	02	02
F.1	Chitradurga Centre	Director	01	01
F.2		Geologist (Sr.)	01	01
G.1	Lucknow Centre	Director	01	01
G.2		Geologist (Sr.)	02	02
H.1	Raipur Centre	Director	01	01
H.2		Geologist (Sr.)	01	01
I.1	Ranchi Centre	Director	01	01
I.2		Geologist (Sr.)	01	01
J.1	Zawar Centre	Director	01	01
J.2		Geologist (Sr.)	02	02
J.3		Chemist	01	01
Total			32	30

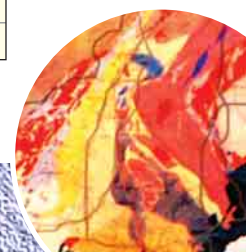
* As on 01.10.2008

11.1.7. Not only in the case of Field Training Centres, but also in respect of GSITI itself, faculty is sourced partly from the Institute, partly from sister organizations and partly from Regions/Wings of GSI as guest faculty. The Committee was informed that because of the present entitlement framework, TA/DA and honorarium to guest faculty (whether sister organizations or GSI's own resources) was seen as being insufficient to attract talent.

11.2.0. The Committee is of the view that the present structure of the Training Institute, while coping with the main task of providing high quality training to a limited number (about 50 in a year) of trainees and specialized training in a few disciplines for about 20-25 trainees at a time (see *Annexure XI.II* for the Training Calendar of FS 2008-09) is clearly inadequate in view of the low capacity availability evident from the following summary: (Table-XI.2).

Table – XI. 2

Sl. No.	Centre	Course	For	Duration	Capacity
1	Hyderabad	Orientation	Newly recruited Geologists	30 -35 days	30 x 3 batches
		Advanced course on processing of Geophysical data	Experienced Geophysicists	3 weeks	15
		Refresher course on Petrological Techniques	Geologists from Petrology field	3 weeks	16
		Refresher course on Geochemical Data handling, etc	Geologists in Geochemical mapping	2 weeks	20
		Digitisation and data entry	Draftsmen	2 weeks	20
		Project Management and Administration	JAG Level Officers	2 weeks	20
		Application of Remote Sensing & GIS for Mineral Exploration.	Faculty from Universities/ Colleges and Geologists from Govt. Organizations.	10 weeks	20
		Applications of GeoInformatics in Disaster Management (ISRO Sponsored)	Central/State Institution and Universities	5 weeks	20
		Digital Image Processing	Geologists from PGRS Division	4 weeks	
2	Lucknow	Palaeontology	JTS/STS officers	2 weeks	10
		Water Sample collection/ Analysis/Data Synthesis	Geologists and Chemists	2 weeks	20
		Workshop on RTI	JAG/JTS-STS	2 days	25
3	Jaipur	Adv. Course on determination of Gold and PGE elements using advanced techniques	Experienced Chemists	1 week	15
4	Nagpur	GIS & RS in earth Sciences using Open source	Geoscientists from CR	2 weeks	16
		RTI	JAG/JTS-STS	2 days	25
		Vigilance Administration	JAG/STS	3 days	20
5	Kolkata	GIS & RS in earth Sciences using Open source	CHQ	2 weeks	16
		RTI	JAG/JTS-STS	2 days	25
		Vigilance Admin.	Group-C	3 days	20



Sl. No.	Centre	Course	For	Duration	Capacity
6	Shillong	GIS & RS in earth Sciences using Open source	Geoscientists from NER	2 weeks	16
		RTI	Group-C	2 days	25
7	Zawar	Orientation	Newly recruited Geologists	30 days	30 x 3 batches
		Advanced course in Mineral Exploration	Geologists	3 weeks	20
		RTI	Group-C	2 days	25
8	Raipur	Orientation	Newly recruited Geologists	30 days	30 x 3 batches
		Material Management	Store Suptdg./Keepers	5 days	20
		Maintenance of Roster	Group-C Ministerial	3 days	25
9	Chitradurga	Orientation	Newly recruited Geologists	30 days	30 x 3 batches
		RTI	Group-C	2 days	25
		Accounts	Group-C	5 days	25
10	Kuju	Orientation	Newly recruited Geologists	30 days	30 x 3 batches
11	Dehradun	Orientation	Newly recruited Geologists	30 days	30 x 3 batches
		GPS technology. GPS Survey	Geologists & Geophysicists	1 week	15
		Engineering Geology	Geologists in engineering geology divn.	2 weeks	15
12	*Pune/Jabalpur/Visakhapatnam/Aryalur	Orientation (short modules related to orientation course)	Newly recruited Geologists	Different duration	30 x 3 batches

*: satellite field centres.

11.2.1. As such the training infrastructure needs a radical overhaul to meet the requirements arising out of the pragmatic recommendations of this Committee; and in particular

- The Training infrastructure must be capable of imparting 9-12 month induction training for upto 300 new Geoscientists every year.
- The training infrastructure must also be capable of providing refresher or capsule courses for in-service geoscientists of GSI and State DGMS
- There must be capacity available for high-end, cutting-edge knowledge delivery particularly for GSI and other Central Institutions.
- There must also be a capability for functioning as an internationally reputed training institute for private sector and geoscientists of other countries.

11.2.2. The Committee, therefore, recommends that

- The GSITI at Hyderabad be developed into a Centre of Excellence for providing high quality cutting-edge training/knowledge delivery, with state-of-the-art facilities.
- Regional Institutes be created at each Region for induction and in-service training of GSI and State DGMS. The Director (Training) located in the Regions but reporting to GSI TI be declared head of the Regional Institute and conferred appropriate administrative and financial powers.

- The Regional Institutes would be part of the Regional Office premises and would function under the day-to-day control of the Regional HOD. The Director (Training) would be part of the Regional Office, and would have with GSI TI for operationalising GSI TI programmes in the Regional Institute.
- The Field Training Centres would function under the Regional Institute rather than GSITI in order to have better management control. Just as each FTC has a specialized function (dependent on the Regional geology) each Regional Training Institute must develop a range of specializations, based on the Region and backed by well-equipped laboratories and specialized Geoscientists of the Region. A possible range of specialization for Regional Training Institutes is given in *Annexure- XI.III*.
- The Training Advisory Committee headed by the Director General, GSI may from time to time recommend creation of additional Field Training Centres for specific subjects.
- In keeping with the hybrid matrix principle, the GSITI would house the Training Mission, and would be responsible for overall Training policy and coordination and programme goals. The GSITI would conduct the Induction Course for GSI Geoscientists, International Courses, and Training of Trainers Courses for Regional Institutes and State Training Institutions and specialized courses, drawing on Regional Institute resources to the extent of the Regional specialization mentioned above.
- The Regional Institutes would conduct short-term courses (generally one week or less) for Regional GSI geoscientists, State Government geoscientists and courses on the regional specialization. The Annual Training Calendar for the Training Mission would be finalized by GSITI in its Training Advisory Committee for both its own programmes and Regional programmes factoring in State DGM requirements also, and placed in the CGPB for final approval.
- The Regional Institute Calendar will be prepared on the basis of SGPB inputs, regarding having needs of State geoscientists. Regional training needs assessments and GSITI general directions. Each Regional Institute should run at least one course a year specially catering to State Government geoscientists of the Region, and courses on its regional specialization should be open to State Geoscientists so that they too can develop parallel capabilities to some extent, particularly on region specific issues.
- Each Regional Institute needs to develop linkages with Central and State Geoscientific Institutions and Universities located within the Region or having specialization related to the Region and offer training services tailored to their requirements. Similarly, the Regional Institute should endeavour to develop resource persons in such institutions to help run its training programmes. The Institutions who are part of CGPB and its Committees are the obvious first candidates in this respect.
- GSITI needs to develop a policy, and the Regional Institutes needs to develop the corresponding capability, of providing suitable training programmes on specific issues for M. Sc. and Ph. D. students. These would be supplemented by training programmes for specific field activities such as sample collection and ground-truthing and students opting for such training could then be deployed in groundwork for NGCM or GMM or HSM fieldwork along with a Geologist.



- Regional Institutes may also provide training to technicians and geoscientists handling or utilizing technical and laboratory equipment, particularly newly acquired sophisticated equipment.

11.2.3. The requirement of in house full time faculty for the GSI TI and Regional Institute based on the above is given in para 8.6.2.8 of Chapter VIII.

11.3.0. The 'Training Advisory Committee' presently headed by the Director General and comprising the heads of Regions and Wings needs to be energized in order to develop, implement and monitor the new approach to training services recommended by the Committee. In view of the fact that the training activity is being vastly expanded to cover all stakeholder organizations, the Committee recommends that in addition to the Training Advisory Committee, there should be a Training Policy Coordination Committee (TPCC) chaired by Secretary, Mines and the TPCC should be responsible for the overall policy and annual strategy. The TPCC may comprise:

- Secretary, Mines
- Additional Secretary / Joint Secretary, Mines
- JS&FA, Mines
- Director General, GSI
- DDG, GSITI
- Addl. DG (Support System-III (Science Policy))
- Representatives of Ministries of Earth Science and S&T *
- Representative of Ministry of HRD*
- Representative of Ministry of DoPT*
- Representative from AICTE
- Secretary, Mining & Geology of two State Governments (to be nominated each year).

* *Not below the rank of Joint Secretary*

11.3.1. The TPCC may meet once a year to review training activities of Training Mission, approve policy and strategy initiatives.

11.4.0. The Committee suggests that in so far as application of the training policy within GSI is concerned:

- The basic approach must be 'training for all'.
- There must be a training needs assessment and training requirements should be set out on that basis, covering short term and long-term in-house training as well as outsourced (i.e. outside GSITI) training.
- Training must cover both the geoscientific disciplines and administration/management areas, with weightage based on the target group.
- There must be a concept of periodical in-service training at various hierarchical levels in order to equip individuals to shoulder the expected higher responsibilities.

- The Committee recommends that at the level of Director and DDG, there must be increasing emphasis of administrative, financial and programme planning and management skills. The Training Mission may identify institution such as ASCI and IIMs and enter into long term MoUs for paid training programmes for its Middle and higher Managements.
- Induction Training for new inductees during probation period must be followed by a Departmental Examination, clearance of which must be a prerequisite for successful completion of probation.
- Support stream staff must be trained in the office practices and procedures relevant to their stream.
- A special annual course on Budgeting, financial procedures, administrative procedures and personnel management must be organized at GSITI for Director Level officers and only those Directors completing the course must be posted at Directors/DDGs in-charge of Finance/Administration at State Units and Regions.
- Capsule courses must be conducted at Regional Institute for Group D and Group C staff, both technical and non-technical.
- GSITI must systematically develop course material, printed as well as audio-visuals for itself and Regional Institutes. These could either be based on faculty contributions (suitably remunerated) or outsourced to academic institution.

11.5.0. The Committee recommends that GSITI aspire to become a degree-awarding Institute by entering into a suitable arrangement with Universities in Hyderabad or nearby so that: -

- it can provide courses for students of Geoscience particularly those who would like to join GSI for a career.
- there is an in-service opportunity to GSI employees to acquire professional degrees, enabling better career progression.
- new and emerging disciplines can be included in academic curricula on need basis, without the normal lead-time inherent in Universities offering such courses on demand basis.

11.5.1. The Committee recommends that GSITI may take up the matter with AICTE for approval and accreditation.

11.6.0. The Committee is aware that faculty and resource persons are key constraints in GSI TI. The Training Advisory Committee needs to develop a long-term perspective and place the matter before the TPCC for a well-considered policy. The Committee advises that

- GSITI should consist largely of in-service Geoscientists from GSI having training aptitude (the current policy which provides a 30% training allowance should be used judiciously to get the most suitable persons, and should not be allowed to become a perquisite to be bestowed on a discretionary and arbitrary basis).
- GSITI must have a few posts to enable geoscientists from Central Institutions and academia to join GSI on deputation. Such an arrangement will ensure the infusion of a well moderated



academic environment in GSITI, facilitate periodic scientific churning and build up the long term reputation of GSITI in case it is able to attract scientists of standing onto its faculty.

- GSITI must have a very liberal policy for inviting guest faculty by providing adequate facilities including airfare, a substantial honorarium, comfortable stay facilities, etc. Small additional perquisites such as local transport etc. should be provisioned since the quality of guest faculty is the prime objective.
- GSITI may create a data bank of guest faculty which it may share with sister organizations as this would further increase the pool of resources. In order to assess and improve quality, GSITI may create two or three classes of guest faculty and have a graded honorarium system.
- GSITI must be proactive in developing its internal training resources, even if it is at some cost to its ongoing programmes, because the long term positive effect of such resource development far outweighs minor current performance shortfalls. Accordingly, GSITI must ensure that at the Regional Institute Level, there is a fair mix of guest faculty and Regional in-house resources.
- Regional Institutes would have minimal core faculty in any case, and through a system of performance appraisal, the Regional Institutes must grade local guest faculty as well as GSI resource persons and identify their resource areas. This will help increase the supply of higher quality resource persons to the GSITI. Retired GSI Geoscientists must be identified on a systematic basis and those with capability must be motivated to contribute to the continued growth of their parent Institutions. It is necessary that guest faculty at regional level, whether from local outside institutions or regions or retired GSI geoscientists, be adequately remunerated for their contribution, and they may be provided transport and stay arrangements at GSI's cost. The Committee strongly recommends that GSI immediately review the current pattern of entitlements in such cases and that a proposal be brought before the TPCC at the earliest.
- The Committee also recommends that the GSITI, develop a policy for foreign exposure of its Geoscientists. It should be the endeavour of GSI to send at-least 30% of its officers at JTS/STS Level for a two to four week training oriented program abroad. The officers must be selected on the basis of their performance and aptitude and GSI may enter into long-term arrangements with premier institutions for the purpose.
- It is not necessary that exposure to the wider international canvas be facilitated only by visits abroad. GSITI must enter into bilateral arrangements with its counterparts in other geoscientific nations so that there is a continuous 'visit & train' programme aimed at those geoscientists who may not be able to be deputed abroad for training. In such programmes, State Governments too must be encouraged to participate.
- The Committee is of the strong view that training, capacity building and knowledge sharing is part of the core activity of GSI. These must be fully funded by the Government. The purpose of such activities is sectoral development, and all training, other than international courses, and courses for private or commercial organizations must be provided by GSI free of cost to the Central and State Government institutions, and as far as possible stay arrangements should be made in the GSI TI/Regional Institute premises, with only the messing expenses being charged on a cooperative no-profit no-loss basis.

NATIONAL TRAINING POLICY

(An Executive Summary)

1. Introduction

Training is very important component of Human Resource Development. It is, perhaps, the most cost-effective method of improving competencies amongst the manpower of any Organisation. Training has now acquired an added relevance for building up the necessary leadership and confidence amongst the civil service to measure upto the expectation of the citizens from it in the context of the rapid technological changes as well as the economic, political and social transformation taking place in the country.

1.1. Need for National Training Policy

Although the Government of India and the State Governments have had broad parameters within which training function has been discharged over the years, the Government of India considers it desirable to have a document containing a formal declaration of its commitment to training and spelling out, in broad terms, the objectives, strategy, content and modalities to be followed in the field of training.

2.0 Training: A Part of Personnel Management

Training is only one of the major elements of Personnel Management System aimed at raising the productivity within an Organisation. The basic objective of obtaining best performance from the Civil Service demands - an integrated scientific approach to such diverse personnel management aspects as recruitment, induction training, in-service training, placement, career progression, a well-thought out scheme of rewards and penalties and last but not the least administrative reforms. For overcoming problems of performance, interventions in one or more segments of personnel management may be called for. A problem, which demands simplification of rules or involves lack of motivation cannot possibly be solved by training interventions alone. Training, therefore, needs to be viewed in proper perspective vis-a-vis the other elements, of the personnel management system and not as a panacea for achieving organisational excellence.

2.1. Why Training

In achievement of its overall goal of performance improvement, training must contribute to the enhancement of professional knowledge, understanding, and skills both at individual and collective levels. It should also equip constituents of an organisation for appropriate response to emerging challenges. The emphasis of training should be on 'doing' rather than 'knowing' only. Training must also achieve a synthesis between improvement of the individual's competencies and promotion of organisational objectives. Training should, in addition help build up high standards of integrity, character and probity in professional life.

2.2. Training should satisfactorily address itself to the following concerns:

(a) Responsiveness

to the challenging democratic needs and expectations of the citizens and organisational and technological developments.



(b) Commitment

to democratic values and concept of partnership and participative decision making.

(c) Awareness

of technological, economic and social developments.

(d) Infusion of scientific temper.

(e) Accountability

to ensure high performance in every profession field and cost effective methods of delivery.

3.0. Two Pronged Strategy

Since the Civil Service System has been formed for the achievement of constitutionally defined goals of the State, training designs should address themselves to the training objectives and concerns for all strata of Civil Service in operational terms. Function-specific action oriented elements, to be built into a composite framework of training design, should complement these common objectives.

3.1. Three Tier Training Approach

Training has to be organised for the entire range of Civil Service system, covering all levels from the lowest to the highest. Special attention needs to be paid to the Civil Servants at the cutting edge, who interface with the public at large and whose performance to a large extent, determines the perception of the common man about the Government functioning. For the purpose of appropriate training design, the civil services may be divided into the following three levels:

1. The lowest-level functionaries, that is operatives at the cutting edge, who are mostly members of the Group 'D' services and the lower stages for Group 'C' services.
2. The supervisory levels and the middle management/administrative level: (they are mostly members of the Group 'B' services, but also shade off into higher stages of Group 'C' at the one and the lower stages of Group 'A' at the other).
3. Group 'A' services and All India Services comprising the top administration/ management level.

3.2. These different levels may also include, for the purpose of training, the equivalent levels of the State Governments. Training programmes for the functionaries at the cutting edge level should put equal emphasis on functional skill and attitudinal orientation. For the middle level, training should contribute to enhancement of professional knowledge, understanding and skill, and at the same time promote widened professional outlook so as to prepare it for future tasks and responsibilities. For the third level, besides offering stimuli for expansion of the mental horizon and attainment of professional excellence, training should also sharpen perceptions in relation to multi-dimensional linkages in policy formulation, development of capabilities in a changing socio-political and technological context, dynamism and innovation tempered with pragmatism.

3.3. The top-most layer of level three, constituted by officers of the levels of Joint Secretary to Secretary to the Government and the corresponding levels in the State Governments, should be intellectually and professionally equipped for holding positions that involve policy analysis, preparation of materials required for high policy making and alternative policy choices, strategic planning and a capacity to perceive and provide for the future trend of issues and events.



3.4. For all, levels training should aim at continuous attitudinal reorientation in changing organisational ambience so as to help the civil servants appreciate the imperatives of a democratic society, namely respect and concern for the citizen's rights and recognition of community as the focal point of all public effort.

4.0. **Significance of Pre-Training Tasks**

A Training Program must be preceded by certain preparatory exercises. Identification of organisational Training Needs through in-house exercises but often involving outside training experts is necessary. A TNA should be supplemented by job analysis for individual functionaries, studying also linkages with lower, corresponding and superior levels. Areas requiring interventions other than training need to be dealt with as such.

4.1. **Design of Training Programmes**

Having identified training as the right intervention the Training Programmes should be designed enlisting active participation of the Organisation, the training institution, Consultants, experts and, if possible, the participants themselves. The training programme should not be too heavy. It should be stimulating enough but must leave time and opportunity for reflection.

4.2. Organisations and training institutions should try to ensure maximum effectiveness of training programmes by use of methods, techniques, and technologies of which there is a wide and expanding range available. There should be greater dependence on action-based training methods that is to say, on-the-job training, particularly for the comparatively low-skill, low- knowledge-level functions; training in the field; action-research and so on. Where such direct action-orientation for training is not, feasible, work-environment-simulating training methods like role-playing, games, and in-basket exercises may be used. Various audio-visual aids especially for distance learning, should be extensively used with a view to reaching a larger clientele that cannot immediately be reached by more direct training methods. The class-room method and other methods involving person-to- person interaction on various for a will, however, continue to occupy a leading position in the scheme of training, particularly for the higher levels of the civil service, whose training will aim at, among other elements, conceptualisation, intellectual pursuits with an academic orientation blended with practical concerns. Case and Incident studies are especially apt for a variety of training events and these should be properly designed and used for appropriate training events.

4.3. The selected government-run and autonomous training Institutions should be oriented to the training programmes for the civil services. Programme design must bear the stamp of being custom-made to achieve specific objectives of the organisation and the individuals or groups, as the case may be. The choice of method by training institutions should be dictated by characteristics of the trainee groups and their needs and not the internal priorities of the training institutions.

4.4. Training Institutions and experts should form work-able networks, which will ensure maximisation in the use of the human and material resources. Faculty exchange, visits and other forms of interaction between training institutions-in the country and abroad will ensure continuous renewal of expertise and professionalism for training institutions and training experts. Strengthening of infrastructure, enlargement of faculty and diversification of training equipments, also will be promoted by networking.



Monitoring and Evaluation of Training

4.5. To prevent training events from going off track, and to obviate lack of empathy between participants and training events and trainers, concurrent monitoring of training events and programmes should be made meticulously. Similarly to preclude any likely mismatch between organisational objectives and training objectives, comprehensive evaluatory exercises would have to be undertaken after a time lag, that is after the Organisation has had an opportunity of putting to use the enhanced-skill and knowledge of trained personnel. Evaluation should be comprehensive and cover the whole range of related issues starting with pre-training steps, with a view to bringing about improvement in organisational and individual performance.

5.1 Periodicity of Training

Although a standard prescription is neither feasible nor desirable, the periodicity of training will be determined by the occurrence of changing in Job-competencies, apart from the wherewithal including financial constraints and infrastructural capacity for the organised higher civil services, career span-specific comprehensive training programmes in each progressive decade of their service may be necessary. In addition, periodic short duration programmes for sensitisation in specific areas at intervals of 2 to 5 years would be desirable. For others, training must be arranged at the time major responsibility changes take place, usually at the time of inter-group promotions, and within group 'C' also at the time of promotion to supervisory levels.

5.2. For all categories of Civil Servants, there must be an induction training, its duration being determined keeping in view the gap between required job-competencies and the actual competence of the new recruits.

5.3. The in-service training must follow a well-formulated scheme rather than an ad-hoc effort in response to situations.

6.1 Attitudinal Transformation

Enhancement of knowledge leads to building up of confidence in individuals. Likewise, enhancement of skills contributes to improvement in competence of individuals. It is, however, the inculcation of the right attitudes, which imbues the individual with a sense of commitment. Attitude plays a very crucial role in determining the actual performance levels. Thus, despite availability of the best of knowledge and skills, the ability for delivery of the desired services may still be found wanting in individuals if they are not imbued with the appropriate attitudinal disposition.

6.2. Attitudes manifest themselves in the shape of behavior of individuals. Formation of attitudes is a function of the environment and experiences of individuals. However, training involving exercises aimed at self-awareness, exposure to new concepts, successful and clear delineation of recipient perceptions will make dents in attitudinal barriers. By way of direct training intervention, preparation and use of appropriate case studies highlighting role of attitude in the success & failure of civil servants and a judicious use of tools of organizational behavior, are recommended.

7.1 Trainers

Trainers can rightly be considered the heart and soul of training function. Being a trainer demands certain special qualities. Because of the direct impact that a trainers makes on his trainees, he must be a

person who is seen as successful in his line department and is imbued with a proper value system. In short, he should be fit for being looked upon as a role model by his trainees.

7.2. It is considered possible to devise reasonably reliable and scientifically developed psychological tests to select potential trainers, having the desired qualities including the right value system. This exercise should be taken in hand.

7.3. The benefits of investment in the development of a civil servant as Trainer will be greater if the expertise of such person is still available even after he leaves the training institution and goes back to his line department. This can be done by using him as a resource person in a network of training Institutions. He may be detailed to look after the training of civil servants at the field level. Thus, "Trainer" may be used as a generic term. The concept of "once a trainer always a trainer" is likely to give an additional sense of importance to the person concerned.

7.4. Standards for trainers, both in quantitative and qualitative terms and an effective monitoring and evaluation system must be evolved and be made operational.

8.1. Trainer Development

There must be a scheme for providing opportunities for upgradation of knowledge and skills in the Trainers. Attending training programmes in institutions of excellence for knowledge upgradation in relevant areas and attending specially designed Direct trainers Skills Programmes and Design of Training Programmes are suggested. There is also an expressed need for developing training modules in the area of Management of Training.

8.2. Incentives

Incentives, both in monetary & other terms need be considered to attract successful line managers with trainer potential to faculty positions in training institutions. Factors leading to reluctance in accepting such assignments, such as loss of job- satisfaction and sense of importance that usually accompanies line postings, and the loss of perks associated with most field jobs, must be duly acknowledged. Incentives like a graded training allowance whose quantum increases with each year successfully spent in the training institution, a preferential housing scheme, and assured admission for children in schools are a few illustrative possibilities.

8.3. The remuneration payable to visiting resource persons would have to be appropriately, determined to ensure the involvement of capable people, since this would provide importance and reasonable compensation for the effort put in by the resource person.

8.4. Trainer Staffing Scheme

It may be desirable and useful if DOP&T could maintain a panel of trainers & potential trainers selected on the basis of scientific psychological testing so that placement of empanelled personnel against training slots is brought about in a systematic manner.

8.5. Institutional Arrangements

There is need to set up and develop suitable infrastructure for induction and in-service training of Civil Service at the cutting-edge and middle levels. The discipline of effective distance learning must receive special attention for, use of this method alone will enable our Training Institutions to communicate effectively with the large numbers amongst the target groups. In-situ training must also find lion's share



while attending to this most important category of manpower in the Civil Service. Increased involvement of Non-Government Organisations for training at the cutting-edge of the Government is also recommended as desirable, feasible and cost effective. For the training of higher civil service, increasing use must also be made, of the excellent network of Training Institutes outside the government. Of course, there must be a continuing dynamic interaction of these institutions with various organs of the government so as to ensure the relevance of programmes offered by the former.

8.6. The Department of Personnel and Training must also set up a workable system for evaluation of training institutions, without adversely impinging upon their professional autonomy.

9.1. Overseas training

Overseas training must be entirely need based, and should predominantly aim at drawing lessons from successful cross-country experiences. The institutions must be carefully selected. Only institutions which are reservoirs of knowledge and data-base on relevant experiences need be used.

9.2. The existing practice of funding most of the overseas training programmes through multilateral/bilateral aid schemes should continue. Such training programmes must be preceded by in-depth briefing of participants on the expectations of the organisation. The participants must also take with them data and literature related to specified problem areas in the Indian context. On completion of training programme, there must be a comprehensive evaluation session, including a debriefing seminar, which must be accorded the highest priority, the top level administration being present. All trainees returning from long term courses must be used in Training Institutions - at least a few of them through formal placement as faculty members - to ensure the multiplier effect.

10.1. Coordination in Training

There must be an institutionalised arrangement within each organisation for overseeing the training function as an integral part of the Personnel Management System. The concept of a 'Training Manager', whose job will be to ensure an integrated approach to Training, has been suggested. The training Manager will be actively involved in the series of activities culminating in organisation of training programmes, such as analysis of training requirements, the design of the training programme, the selection of appropriate training institutions and evaluation of training. Most significantly, he will advise the top management about the kind of interventions, both training and non-training, required for overcoming specific problems of performance. The Training Manager will act as an interface between the Department/State and Training Institutions on one hand and between Department/State and DOP&T on the other.

11.1. National Training Council

There shall be a National Training Council headed by the Minister-in-charge of Personnel, Public Grievances & Pensions in the Government of India and consisting of the representatives of the State Government, administrative heads of major Ministries and other major functional organisations of the Government of India, major training institutions in and outside the Government, as well as reputed training consultants and experts. The Council will be responsible for advising the Government of India on matters related to training policy, training design, and programmes as well as issues concerning their implementation. It will prepare and up-date, from time to time, guidelines for organisations of Government and training institutions, for operationalising the National Training Policy. The Council shall be assisted by a high powered Coordination Committee of Directions headed by Secretary (Personnel). The Committee will generally oversee operationalisation of the Training Policy. It will

ensure that training plans are actually drawn up by cadre controlling authorities, syllabi are prepared, and proper planning of training activity takes place through preparation of Perspective Plans, Annual Action Plans and Triennial Reviews.

11.2. The elements, contained in this training policy resolution are expected to provide guidance for the training dispensations of the State Governments as well. It is expected that every State Government also will formulate a training policy along similar lines, and provide for training infrastructure for civil servants under the employ of the State Government.

12.1. **Role of Department of Personnel and Training**

There should be an apex Organisation for coordinating the various activities involved in giving concrete shape to the training policy prescriptions and preparation of training programmes oriented to achieving the goals and objectives of the State. The Department of Personnel and Training of the Government of India, which in the present scheme of things, is the apex agency for preparing training policy and coordinating implementation of Government's Training Programmes and other related responsibilities, including those for maintaining liaison with the State Governments, Training Institutions, experts, as well as academic institutions involved in training, should continue to be the apex agency in the new dispensation for training. It will coordinate training related work of the Central Government 'With similar work of the State Governments. It will take initiative in networking training institutions and resources, develop a strong data base covering the entire spectrum of training activities and institutions, and act as a clearing house of training related information and data. It should coordinate the work of developing training performance criteria for various organisations and fields of specialisation in which Government is concerned. It will also examine the Practicability of acting as a centre for certification of training standards, relating to the work of governmental organisation. DOP&T will also service the Trainer Staffing Scheme.

13.0. **Funding**

Training is a vital instrument for human resource development. It is central to any scheme of action aimed to effective realisation of the goals and objectives of the State. Government is, therefore, committed to allocating money and training related resources to maximum feasible extent. Each department of Government and other major organisations like the attached office, as well as other Organisation funded by the public exchequer, should set apart a suitable minimum percentage of its budgetary provision for training purposes, which may be determined by Department of Personnel and Training after a careful analysis of factors such as recommended periodicity of training, actual costs that have to be Incurred for training of each category, the numbers involved and last but not the least, the existing funding levels so as to ensure realism in the targets. Pending such an exercise, the group recommends adoption of 5% of salary budget as the norm during the interim period. There will be a specific earmarking of this amount, which should not be diverted to other purposes.

13.1. Training institutions should develop and implement high quality training programmes and diversify their training-related activities to cater to the increasing requirements of organisations and functional groups in and outside the government. This will enable them to tap resources available with the private sector business and industrial enterprises and thereby attain a larger measure of self-reliance.

14.1. **Human Resource Development**

Members of the Civil Service must be encouraged to take initiatives for their self-development. They should be encouraged to undertake activities like research and consultancy, if necessary, by availing



study leave. With a view to instill greater practical bias and realism in the content of Training Programmes, the special expertise acquired over a period of time by certain members of the Civil Service must be put to use by involving them in the training programmes. A system should be developed whereby special expertise developed by Civil Servants in the course of certain assignments is properly documented soon after the end of their tenure on such posts, if necessary by posting them as Officers on Special Duty on extended tenure of upto 6 months with office facilities, on a selective basis.

15.0. TRAINING: A PART OF PERSONNEL MANAGEMENT SYSTEM

Training is a segment of Personnel Management system that strives to contribute to the overall goal of performance improvement. Training is organically linked to the other components of Personnel Management System, and can play a most significant role in optimisation of the performance of constituents of an Organisation.

15.1. Performance is a derivative of knowledge and skills of the constituents, their motivation and morale as reflected through their attitudinal disposition and the way the environment under which they work impacts on them and their areas of work. Whereas increase in knowledge arguably imparts confidence, the skills contribute to enhancement of competency of individuals. Attitude primarily leads to commitment to job, resulting in enhanced client/customer satisfaction. As already stated environment plays a very important role in performance improvement. Absence of an appropriate environment can often act as a drag and the overall performance of the individual can consequently suffer in spite of knowledge and skills both being available.

15.2. With a view to enhance the performance parameters both at individual and organisational levels, it is imperative that appropriate attention is focused on all components of Personnel Management, starting with recruitment, placement, promotion, deputation outside the parent Organisation, the system of performance evaluation, reward, penalty and administrative reforms. The Group therefore, feels that different facets of Personnel Management should be suitably addressed in order to devise an integrated and purposeful Personnel Management System of which training will be a crucial segment.

15.3. In most real life situations the change factors necessary for performance enhancement will be a mixed basket of issues that are amenable to training intervention and those requiring other than training intervention, including change of laws, rules, procedures, techniques and technology etc. Very often the process of organisational change or improvement has to begin with these latter factors, before training intervention can be expected to be meaningful. For example, if the procedure for issue of a licence is complex, multi-stage, time consuming, and is riddled with ambiguities, then training of officials on how to issue license quickly can have no impact and may even become counter productive. The obvious starting point will be a simplification of procedure which may be accompanied by training on quicker issue of licence. Thus a rational sequencing of events, training oriented and others, is the essence of any serious exercise aimed at improving organisational performance. Needless to say, some events must precede, some may accompany and many others may have to follow the training event.

15.4. A Personnel Management System must strive for a dynamic approach to management strategy for effective delivery system. It must also equip the civil service to understand, appreciate and manage its own change. Training can play a pivotal role in realisation of this objective. Training can become a crucial means of making the Government instrument effective.

15.5. What is therefore, required is a coordinated approach to training, inter-weaving the training function with other components of Personnel Management System. Having so decided at a conceptual



level operational mechanism need to be put in place. Nodal agencies need to be established to take care of these requirements, taking a holistic view in the matter. The group feels the need for a functionary within each Organisation, who may be designated as a Training Manager, whose job it will be to oversee and coordinate an integrated approach in the matter. More detailed discussion on this has been included in the chapter on "Institutional Arrangements for Training".

16.0. There is a paramount need to establish training as a demonstrably necessary, useful and result oriented intervention. Having done this, training must also be prescribed as a mandatory exercise with linkages with Personnel Management System in general and career progression in particular.

16.1. Relevance of Placement in Training

It has been suggested that the fact that one may be doing a different kind of job every few years of one's career, may render implausible any long-term strategy for training the Civil Services. There is only a limited truth in this assertion. The Governmental System is really constituted by function-specific, organisational structures, let us say sub-systems, in which a sub-system is self-contained to a large degree, and enjoys considerable functional autonomy within certain defined limits. Most of the employees spend their entire career within this sub-system. For example, the income tax or the customs or excise duty administering sub-system of the government has all the basic characteristics of a functionally specialised entity which can draw up a comprehensive training strategy reflecting both the imperatives of a common strategy to be prescribed for the whole Civil Service System and those posited by the organisational specificities of the sub-system concerned. Of course, there are also some work-unit-based variations within the same Organisation or sub-system. The most common variation is between the line and the staff. In any case, training is meant to promote flexibility, and not rigid pigeonholing within the Organisation. Unless a job is heavily technical in nature, a fair deal of movement of personnel within the organization takes place from one work unit to another; and this fact does not necessarily detract from the quality of specialisation of the personnel concerned.

16.2. The group is conscious of the fact that formulation of an integrated -Personnel Management policy is not an easy task, particularly in the current environment. The federal character of the polity imposes its own imperatives upon an administrative system in which a two-way traffic of personnel between the Central Government and the State Governments takes place. The career expectations of an individual are, not always congruent to the organisation's expectations, goals and objectives. The dictates of the organisational goals in charting a career progression path for the individual may be in conflict with the individual's expectations.

17.0. OBJECTIVES OF TRAINING

Training is a systematic process of developing professional knowledge, understanding and skill, both of individuals and groups that serve the organization, in our case, the governmental system. It also prepares them to anticipate, by the application of objective, scientific methods of analysis,- the future trends likely to arise in the Organisation and the professional fields concerned and enables them to make appropriate response to challenges that may be posed by these trends. The focus of training is thus on action, of "doing" specified things, rather than merely acquiring knowledge about them.

17.1. Training should also stimulate and motivate trainees to widen their mental horizon, promote innovativeness, develop a scientific temper imbued with professional ethics which, for public servants, must include a respect and concern for the citizen and the client whose interest has been entrusted to him.



17.2. Training cannot have as its aim only the improvement of the individual and the group; it must blend this aim with the larger aim of promoting organizational objectives. The organization, which is the subject of the study, being the governmental system of the country (i.e. all the tiers of the polity), the organizational goals are incomparably larger, more complex and diverse in nature than those of any other organization.

17.3. For operational purposes, however, organising training for such a vast governmental system as ours may turn out to be less formidable a task than the above statement may indicate. Since the governmental system consists of building blocks, more or less functionally largely, -it is largely feasible to translate the large body of its complex and diverse goals into more or less discrete, performance-objectives achievable by each building block, that is department or other organization, or work unit of the Government.

18.0. Training Objectives

The Group has examined a number of expert formulations or the answer to the question, -what should training objectives be. Besides, in its interaction with officials of the Union and the State Governments as well as experts of training institutions, it has come across a number of suggestions on the subject. The following elements find place virtually in every suggested formulation:-

18.1. Keeping up-to-date and enhancing professional knowledge and competence needed for better performance. Promoting better understanding of professional requirements as well as, sensitization to professional, socioeconomic and political environment in which work is done.

18.2. Up-dating and enhancing professional skill for improving actual performance of individuals and organizations.

Bringing about right attitudinal orientation.

The Group proposes to treat these training objectives at two distinct yet conceptually related, levels:

18.3. Improving the Civil Service system as an instrument for effective realisation of the State's goals (as enshrined in the Constitution, and the body of laws as well as policies of the government). In other words, the aim is the attainment of professional excellence by the Civil Services for achieving the state's goals; and

18.4. Adapting, this professionalism to the requirements of a particular set of objectives, embodied in the laws, policies and programmes of the Government.

In other words, at the first level the emphasis is on professional competence to achieve the organizational goal in the generic sense of the term. In the second level, it is development of performance skills for achieving a specific set of objectives underlying the extant laws, policies and programmes of government. The importance of this second point can hardly be over-emphasized at a time when a radically redefined and sharply focused set of objectives are being projected by the Government for informing the working of the administration.

19.0. Concerns of Training Programmes

Influenced by these changes in policy, training programmes for the Civil Services should be substantially conditioned-by the following concerns

(a) Responsiveness

to the challenging democratic needs and expectations Of the citizens and organisational and technological developments.

(b) Commitment

to democratic values and concept of partnership and participative decision making.

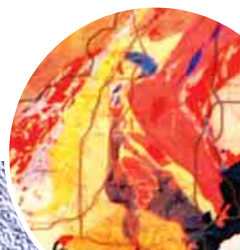
(c) Awareness

of technological, economic and social developments.

(d) Infusion of scientific temper

(e) Accountability

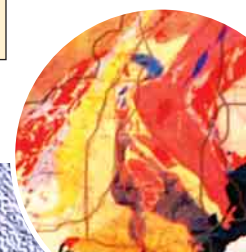
19.1. To ensure high performance in every professional field and cost effective methods of delivery. These concerns are by no means exhaustively listed but can at best be considered illustrative in nature. What can be said more authoritatively is that not all of them will be relevant to every task, nor is there a standard formula for mixing different concerns in -designing a training programme. Different levels of the civil services and different functional categories within the, same level will need varying mixtures of the basic element of the training objectives, and the embodiment in the programme of various concerns cited above.



Training Courses during the Field Season 2008 - 09

Sl. No.	Title of the Course	Eligibility	No.of seats	Venue	Duration	Month of commencement (Tentative)
A. SCIENTIFIC COURSES (11 courses)						
1	31st Orientation Course for Geologists (2 batches)	Newly recruited Geologists	52	Raipur, Jabalpur, Kaju, Pune, Zawar, Dehradun, Hyderabad, Visakhapatnam, Ariyalur & Chitradurga	9 months (approx.)	November, 2008
2	Field workshop on Iron-Manganese exploration in Bonai-Keonjhar Belt, North Orissa	Geologists engaged in Fe-Mn exploration	15	Joda / Barsuan	2 weeks	October / November, 2008
3	2nd Refresher Course in Palaeontology	JTS/STS level officers	10	Lucknow	2 weeks	November, 2008
4	Advanced course in Mineral Exploration	Geologists engaged in mineral exploration	20	Zawar	3 weeks	November, 2008
5	2nd Advanced course in determination of gold and platinum group of elements using latest state-of-the-art instrumentation techniques	Chemists with at least 5 years experience in instrumental methods of chemical analysis	15	Jaipur	1 week	July, 2009
6	2nd Advanced course on processing of geophysical data	Geophysicists with 8 to 10 years of field experience	15	Hyderabad	3 weeks	July, 2009
7	Course on GPS technology, GPS survey - data collection, processing, analysis and interpretation	Geophysicists and Geologists	15	Dehradun	1 week	July/August, 2009
8	Course on Digital Image Processing and Digital Photogrammetry	Geologists deployed in PGRS Div.& Natural Hazards like Landslides, EG, EQG etc. Divisions	16	Hyderabad	4 weeks	August, 2009
9	11th Refresher course on Engineering Geology	Geologists engaged in EG investigation, those with 5 years mapping experience and teaching staff of universities	15	Dehradun / Jammu	2 weeks	August, 2009
10	8th Refresher course on Petrological Techniques and Interpretation	Geologists from Pet. labs and geological mapping with 5 years experience	16	Hyderabad	3 weeks	September, 2009
11	4th Refresher course on Geochemical data handling, preparation and interpretation of geochemical maps	Geologists engaged in geochem.mapping and having computer awareness	20	Hyderabad	2 weeks	September, 2009

Sl. No.	Title of the Course	Eligibility	No.of seats	Venue	Duration	Month of commencement (Tentative)
B. TECHNICAL COURSES (6 courses)						
14	Application of GIS & RS in Earth Sciences using Free and Open Source Software (3 courses)	Geoscientists from various streams of CR, CHQ & NER	16	Kolkata, Nagpur & Shillong	2 weeks each	October, 2008 January-May 2009
12	12th Course in Digitisation and Data entry for Draughtsmen	Draughtsmen	20	Hyderabad	2 weeks	February, 2009
13	5th Refresher course on Material Management for Stores personnel	Store Superintendents / Store Keepers	20	Raipur	5 days	February, 2009
15	1st Refresher course on Water sample collection, analysis, data synthesis and interpretation	Chemists and Geologists with 5 years of experience	20	Lucknow / Faridabad	2 weeks	September, 2009
C. ADMINISTRATIVE COURSES (11 courses)						
16	2nd to 4th Workshops on RTI Act, 2005 for JAG/STS-JTS level officers (3 courses)	JAG/STS-JTS level officers	25	Kolkata, Lucknow & Nagpur	2 days each	October, 2008 onwards
17	1st to 3rd Workshop on RTI Act, 2005 for Group 'C' ministerial staff (3 courses)	Group 'C' ministerial staff	30	Chitradurga, Zawar & Shillong	2 days each	October, 2008 onwards
18	29th Workshop on Project Management and Administration for JAG level officers	JAG level officers, Directors in TC, TS and HOOs	20	Hyderabad	2 weeks	February, 2009
19	2nd Refresher course on Accounts related matters for Group 'C' ministerial staff	Group 'C' Ministerial Staff	25	Chitradurga	5 days	February, 2009
20	2nd Workshop on Vigilance Administration for JAG/STS level officers	JAG / STS level officers	20	Nagpur	3 days	March, 2009
21	2nd Basic course on Maintenance of Roster for Group 'C' ministerial staff	Group 'C' ministerial staff	25	Raipur	3 days	April, 2009
22	2nd Refresher course on Vigilance Administration for Group 'C' ministerial staff	Group 'C' ministerial staff	20	Kolkata	3 days	July, 2009
D. SPONSORED COURSES (2 courses)						
23	8th Course on Application of Remote Sensing and GIS for Mineral Exploration under NNRMS programme - ISRO sponsored	Faculty from universities / colleges and geologists from govt. organizations	20	Hyderabad	10 weeks	January, 2009
24	5th Course on Application of Geoinformatics in Disaster Management (ISRO Sponsored)	Participants from central, state govts. & faculty from universities	20	Hyderabad	5 weeks	May, 2009



Regional & Field Training Institutes: Suggested areas of specialization

Region	Specialization	FTC	Specialization
SR, Hyderabad Comprising the States of - <ul style="list-style-type: none"> ● Andhra Pradesh ● Karnataka ● Kerala ● Tamil Nadu ● Goa ● Pondicherry [The Training Institute in this once case would be attached to GSI TI rather than the Region]	<ul style="list-style-type: none"> ● Remote Sensing ● Geoinformatics ● GIS ● Numerical simulation modeling and prognosis modeling for geospatial data ● Digitization ● Geochemical Data Handling ● Geostatistics ● Geophysical Data Processing ● Geochemistry ● Analytical Chemistry for ultra low precision ● Geophysics ● Geotechnical Studies ● Rock Mechanics ● Deep Geology 	Chitradurga	<ul style="list-style-type: none"> ● Greenstone and High grade metamorphic terrain mapping techniques. ● Achaean/Proterozoic ● Mineral Exploration
NR, Lucknow Comprising the States of - <ul style="list-style-type: none"> ● Haryana ● Jammu & Kashmir ● Punjab ● Himachal Pradesh ● Uttarakhand ● Uttar Pradesh 	<ul style="list-style-type: none"> ● Glaciology ● Seismo-tectonics & earthquake Engineering ● Engineering Geology ● Geo-hydrology ● Neo-tectonics ● Paleobiology ● Himalayan Stratigraphy ● GIS ● Earthquake Geology 	Lucknow	<ul style="list-style-type: none"> ● Quaternary Geology ● Geo-hydrology ● Himalayan Stratigraphy ● Thrust Tectonics ● Landslide and Landslide Hazard Studies ● Active Fault Mapping ● Geomorphology of Glaciated Terrains ● Geothermal Studies ● Environmental Geology & Ecological Studies
CR, Nagpur Comprising the States of - <ul style="list-style-type: none"> ● Madhya Pradesh ● Maharashtra ● Chhattisgarh 	<ul style="list-style-type: none"> ● Mineral Exploration ● Geochemical Exploration ● Quaternary Geology ● Deccan Traps ● Geostatistics ● Seismo tectonics ● Medical Geology ● Geoarcheological Studies 	Raipur	<ul style="list-style-type: none"> ● Photogeology & Remote Sensing Studies ● Mineral Prospecting & Exploration ● Purana Basin Studies ● Medical Geology & Land Use ● Geophysical Seismic Studies ● Drilling Techniques
ER, Kolkata Comprising the States of - <ul style="list-style-type: none"> ● Bihar ● Jharkhand ● Orissa ● West Bengal ● Andaman & Nicobar Islands 	<ul style="list-style-type: none"> ● Geotechnical Studies ● Geochronology ● Isotope Geology ● Paleontology Studies ● Biometric and quantitative palaeontology ● Geochemical ● Geophysical 	Ranchi	<ul style="list-style-type: none"> ● Mapping Techniques in Coal Field Areas ● Coal Exploration ● Sedimentary Basin Analysis ● Borehole Logging ● Gondwana Geology ● Coal Petrography

Region	Specialization	FTC	Specialization
	<ul style="list-style-type: none"> • Meteorite • Coastal & Near Shore Processes • Fragile Ecosystem Studies and Geo-Biosphere • Medical Geology • Map Synthesis & Map Compilations • Drilling Technologies • Petrology & experimental petrology and mineralogy • Gem Testing • Administrative & Legal Aspects • Project Management • Financial Management • Geoinformation management • 3D Visualization and Virtual reality • Network & System management • Web Management, Web technology & system integration 		
WR, Jaipur Comprising the States of - <ul style="list-style-type: none"> • Gujarat • Rajasthan 	<ul style="list-style-type: none"> • Geochemical • Geophysical Field Studies • Achaean/Proterozoic Terrain Mapping • Geo-mathematics 	Zawar	<ul style="list-style-type: none"> • Techniques to study Basemetal Mineralization • Large-scale Geological Mappings • Techniques of Surveying • Geophysical & Geochemical Exploration Field Studies • Integrated Geoscience Studies • Exploration Techniques for precious & industrial minerals • Desert Geology • Drilling Technologies • Ore Deposit Modeling & Evaluation • Ore Petrology • Geostatistics
NER, Shillong Comprising the States of - <ul style="list-style-type: none"> • Assam • Arunachal • Mizoram • Manipur • Meghalaya • Nagaland • Sikkim • Tripura 	<ul style="list-style-type: none"> • Administrative Training for JAG & SAG Level Officers • Geoinformatics and Allied Components • Map Compilation Techniques • Geo-Biosphere studies • Geomorphology and Terrain evaluation. 	Aizwal (proposed centre)	<ul style="list-style-type: none"> • Landslide & Landslide Hazard Studies • Geoenvironmental & Fragile Ecological Studies • Mapping Techniques for Tertiary Rocks • Terrain Evaluation • Neotectonics

