Bhel report assignment

COMPANY PROFILE •Background & Management •Values, Mission & Objective •BHEL's product profile •Financial profile of BHEL •Shareholding pattern BHEL —– AN OVERVIEW BHEL is the largest engineering and manufacturing enterprise in India in the energy related infrastructure sector today. BHEL was established more than 40 years ago ushering in the indigenous Heavy Electrical Equipment industry in India, a dream which has been more than realized with a well- recognized track record of performance.

It has been earning profits continuously since 1971-72 and achieved a sales turnover of Rs 14525 Crores with a profit before tax of Rs 2564 Crores 2005-06. In 2007 BHEL has achieved an all time high turnover of Rs 18739 crores, notching a growth of 29% over the previous year. Net profit has soared by 44% to 2415 crores over 1679. 2 crores of last year. BHEL has been paying dividends over a quarter century and in line with the excellent performance during the financial year 2005-06, an all time high dividend of 145% has been paid.

BHEL caters to core sectors of the Indian Economy viz. Power Generation and Transmission, Industry, Transportation, Renewable Energy, Defense, etc. The wide network of BHEL's 14 manufacturing divisions, 4 power sector regional centers, 8 service centers, 15 regional, offices and a large number of Projects Sites spread all over India and abroad enables the Company to promptly serve its customers and provide them suitable products, systems and services-efficiently and at competitive prices.

BHEL has already attained ISO 9001 certification and all the units/divisions of BHEL have been upgraded to the latest ISO-9001; 2000 version quality

standard. All the major units/divisions of BHEL have been awarded ISO 14001 certification for environmental management systems and OHSAS 18001 certification for occupational health and safety management systems Major Miles stones in the history of BHEL •FEB. 1947 – The planning board felt the need for electrical machinery in India. •MAR. 1948 – Sir J. C.

Ghosh set up heavy electrical generating equipment factory in the state sector. •JAN. 1955 – S. A. Gadkary committee reiterates the need for heavy electrical factory. •AUG. 1956 – Heavy Electrical (Pvt.) LTD, was incorporated which was later renamed as HE (I) LTD. •NOV. 1964 – Bharat Heavy Electrical Ltd, was established and plants at Haridwar, Hyderabad & Trichy were set up. •JULY. 1972 – Action committee of public Enterprises recommends integration. •JAN. 1974 – HE (I) LTD and BHEL were formally merged and the corporate plan of the company was prepared. JAN. 1980 – BHEL was set up 3rd generation plants at TRICHY – steel tube plant HARIDWAR – casting and forging plant JHANSI – transformer plant •In 1982- BHEL also entered into power equipments, to reduce its dependence on the power sector. So, it developed the capability to produce a variety of electrical, electronic and mechanical equipments for all sectors, including transmission, transportation, oil and gas and other allied industries. •In 1992, During the year, 10 thermal sets, 2 gas sets and 11 hydro sets were commissioned.

Government of India’s liberalization policy and disinvestments policy on its pattern of shareholding in PSUs. •In 1994,- During the year the company established Asia’s largest fuel evaluation test facility at Tiruchi – The Company commissioned ten industrial power plants resulting in power

generating capacity addition of 293 KW' •In 1995, – The country's premier state owned undertaking, BHEL, has commissioned India's first 250 mw capacity thermal generating unit at Dahanu power station in Maharashtra.

BHEL won this World Bank contract against competition from multinationals. •In 1997, In Feb. Greater autonomy was given to PSUs. 9PSUs including BHEL were selected as Navratnas to become Global Giants The public sector Bharat Heavy Electricals Ltd (BHEL) has won the national best exporter award for 1995-96, instituted by the Engineering Export Promotion Council, of the eighth consecutive year, from Madurai.

In June, Govt. announces first autonomy package for Navratnas • In 1998,- The public sector Bharat Heavy Electricals Ltd (BHEL) has entered into an agreement with the Indian Space Research Organization (ISRO) for manufacture and supply of solar panels for upcoming Indian Satellites. •In 1999,- Bharat Heavy Electricals Ltd (BHEL) has entered into a technical collaboration agreement with Babcock Borsig Power GmbH of Germany for the manufacture of `once through boilers` •In 2000

The Company has won the top exporters award among the public and private sector companies in India for the 11th Consecutive year The Company is considering a proposal to launch a voluntary retirement scheme (VRS) to `select` employees who have been under performing and not managed any promotions or those who have consistently taken leave or any other proficiency related criteria. – The Company has bagged the `Samman Patra` award from the Finance Ministry for its unblemished track record with Airport Customs in regard to payment of customs duties. In 2001,- Bharat Heavy

Electricals Ltd. has bagged the prestigious `Golden peacock` national quality award for the second consecutive year for achieving excellence in quality conforming to global standards. •In 2002, Awarded the top exporters` award by Engineering Export Promotion Council for the year 1999-2000 -Receives award from Confederation of Indian Industry (CII) becoming the first PSU to win this honour •In 2003- BHEL and TCS tie-up to develop IT-based solutions for power sector •In 2004-

Bhel has joined hands with a UN body `Global Compact` to share experiences with global corporate houses for greater focus on corporate social responsibility Appoints A K Puri as the chairman and managing director of Bharat Heavy Electricals Ltd (Bhel). •In 2005- Delists equity shares from the Madras Stock Exchange Ltd (MSE) w. e. f. January 19, 2005. Delists equity shares of the Company voluntary from The Stock Exchange, Ahmadabad (ASE) with effect from January 28, 2005. -BHEL, TCS jointly working on marketing initiative `Power Pack`-Appoints Dr V.

Gopalakrishnan as Chief of the Bharat Heavy Electricals Ltd at Tiruchi Bhel`s Trichy, Bangalore plants win five National Safety Awards •In 2006,- BHEL inks agreement with IIT Madras for new courses. Bechtel signs Dabhol agreement with BHEL •In 2007,- BHEL has raised its research & development spend to Rs 238 crore during fiscal 2006-07, up from Rs 152 crore last year. BHEL gets ICWAI national award for excellence in cost management 2006. In Feb. BHEL pays all-time high 125% interim dividend for fiscal 2006-07. BHEL employees win maximum number of Prime Minister’s Shrama BHEL achieved an all time high turnover of Rs. 8739 crore in Comparison to last year of Rs 14525 crore Net profit has soared by 44% to Rs. 2415 crore in comparison to

last year of Rs. 1679. 20 crore BHEL has announced 245 % of dividend on its original equity. An issue of bonus share in the ratio of 1: 1 has been declared by the company. Values: ? Strike adherence to commitments ? Foster learning, creativity and team work. ? Ensure speed of response ? Respect for dignity and potential for individual ? Loyalty and pride in the company ? Zeal to excel and zest for change ? Integrity and fairness in all matters ? Most of them have been rephrased. “ Zest for change” has been added as change has been integral with success and the rate at which change is needed is very high compared to earlier period. OBJECTIVES GROWTH To ensure a steady growth by enhancing the competitive edge of BHEL in existing businesses, new areas and international operations. PROFITABILITY To provide a reasonable & adequate return on capital employed, primarily through improvement in operational efficiency, capacity utilization & productivity and generate adequate internal resources to finance the company’s growth CUSTOMER FOCUS

To build a high degree of customer confidence by providing increased value for his money through internationals standards of products quality, performance and superior customer services. PEOPLE ORIENTATION To enable each employee to achieve his potential, improve his capabilities, perceive his role & responsibilities and participate & contribute positively to the growth and success of the Company. To invest in human resources continuously and be alive to their needs IMAGE To fulfill the expectations which stakeholders like government as owner, employees and the country at large have from BHEL. BHEL PRODUCT PROFILE 1.

Power Generation Power Generation Sector comprises thermal, hydro and nuclear power plant business. As of 31. 3. 2006. BHEL supplied sets account for 76741 MV in the country, as against nil till 1969-70 Custom- made hydro sets of Francis, Pelton and Kalpan for different head-discharge combinations are also engineered and manufactured by BHEL In all, orders for more than 880 utility sets of thermal, hydro, gas and nuclear have been placed on the company as on date. The power plant equipment manufactured by BHEL is based on contemporary technology comparable with the best in the world, and is also internationally competitive . Industries BHEL manufactures and supplies major capital equipment and system like captive power plant, centrifugal compressor, drive turbines, industrial boilers and auxiliaries etc. BHEL has also emerged as a major supplier of controls and instrumentation systems, especially distributed digital control systems for various power plants and industries. 3. Transportation Most of the trains on Indian Railways, whether electric or diesel powered are equipped with BHEL's traction propulsion system and controls. India's first underground metro at Kolkata runs on drives and controls supplied by BHEL.

Almost all the EMUs in service are with electrics manufactured and supplied by BHEL. BHEL has also diversified into the area of track maintenance machines for Indian Railways. 4. Renewable Energy BHEL has been manufacturing and supplying a range of Renewable Energy systems and products. It includes Solar Energy systems namely, PV modules, PV power plants, solar lanterns, solar pumps etc . 5. Oil and Gas BHEL is supplying onshore drilling rigs' equipment viz. draw works, rotary table, traveling block,

swivel, mast and sub structure, mud systems and rig electrics and X'mas tree valves 6. Transmission

BHEL supplies a wide range of products and systems for transmission and distribution application. The products manufactured by BHEL include power transformers, instrument transformers, dry type transformers etc. ACTIVITY PROFILE Power Generation and Transmission •Steam Turbines-Generator sets and Auxiliaries •Boilers and Boilers Auxiliaries •Nuclear Power Generation Equipments •Hydro Turbines-Generator Sets & Auxiliaries •Gas Turbines-Generator Sets •Heat Exchangers •Condensers •Bag Filters •Valves •Pumps •Electrical Machines •Power, Distribution and Instrument Transformers •Reactors •Porcelain

Industries/Transportation/Oil & Gas /Renewable Energy •Steam Turbine-Generators Sets •Gas Turbine-generators Sets •Diesel Engine-Based Generators •Drives Turbines •Marine Turbines •Industrial Heat Exchangers •Industrial Valves •Industrial Fans •Capacitors •Broad Gauge AC, AC/DC Locomotives •Diesel-Electric Shunting Locomotives •Traction Motors & Control Equipment •Electric Trolley Buses •Battery operated Passenger Vans •Oil Rigs and Oil Field Equipment •Wind Electric Generators •Stand-alone and Grid-Interactive •Solar Power Plant •Solar Water Heating Machine Systems and Services •Turnkey Utility Power Station/EPC contracts Captive Power Plant •Consultancy Services •Construction Services •Software packages for Utilities BHEL IN INDIA REGIONAL OFFICES (POWER SECTOR): 1. NEW DELHI (NORTHERN REGION) 2. CALCUTTA (EASTHREN REGION) 3. NAGPUR (WESTHREN REGION) 4. MADRAS (SOUTHREN REGION) BUSINESS OFFICES: 1. BANGLORE 2. BHUBANESHWAR 3. BOMBAY 4. CHANDIGARH 5.

GUWAHATI 6. JABALPUR 7. JAIPUR 8. LUCKNOW 9. MADRAS 10. NEW DELHI 11. PATNA 12. RANCHI 13. SECKUNDRABAD MANUFACTURING UNITS:- 1. BANGALORE 2. BHOPAL 3. HARDWAR 4. HYDRABAD 5. JHANSI 6. RANIPET 7. RUDRAPUR 8. TIRUCHIRAPALLI SERVICE CENTRES:- 1. BANGALORE 2. BARODA 3. CALCUTTA . CHANDIGARH 5. SECUNDRABAD 6. NEW DELHI 7. NAGPUR 8. PATNA 9. VARANASI Board of Directors Shri Ashok K. Puri Chairman and Managing Director Shri Naresh Chaturvedi Director Dr. Surjeet MitraDirector Shri Vineet NayyarDirector Shri Sanjay M. DadlikaDirector Shri Ashok K. Aggarwal Director Shri Manish GuptaDirector Shri Shekhar DuttaDirector Shri Raman Singh SidhuDirector Shri Madhukar Director Shri Ramji RaiDirector (ER) Shri S. K. JainDirector (HR) Shri A. K. MathurDirector (IS) Shri K. Ravi KumarDirector (Power) Shri C. S. VermaDirector (Finance) Shri N. K. SinhaCompany Secretary

HEAVY ELECTRICAL EQUIPMENT PLANT, HARDWAR: Heavy Electrical Equipment Plant, Hardwar of this Multi-unit corporation with its 7467 strong highly skilled technicians, engineers, specialists and professional experts is the symbol of Indo Soviet and Indo German Collaboration. It is one of the four major manufacturing units of the BHEL. With turnover of 1088 crores and PBT of Rs. 68 crores, HEEP added 3000 MW of power to the National grid during 2001-02. HEEP is engaged in the manufacture of Thermal and Nuclear Sets up to 1000MW, Hydro Sets up to HT Runner dia 6300mm, associated Apparatus Control gears, AC& DC Electrical achines and large size Gas Turbine of 60-200 MW. HEEP Hardwar contributes about 44% of India’s total installed capacity for power generation with total capacity of Thermal, Nuclear & Hydro Sets of over 45000MW currently working at a Plant Load

Factor of 76% and Operational Availability of 86%. Inspite of acute recession in economy, BHEL Hardwar bagged recent orders worth 1500 Crores including repeat orders for Suratgarh-5, Kota-6, Raichur-7, Rihand-3&4 and Ramagundam-7 Unit. Additionally, Mejia-4, Panipat-7&8, Maithon and Bhatinda are in pipeline. HISTORICAL PROFILE:

The construction of heavy electrical equipment Plant commenced in Oct. “ 1963” after indo-soviet technical co-operation agreement in Sept. “ 1959” The first product to roll out from the plant was an electric motor in January 1967. This was followed by first 100 MW Steam Turbine in Dec. 1969and first 100MW Turbo Generator in August 1971. The plant’s “ break even” was achieved in March 1974. BHEL went in for technical collaboration with M/s Siemens, Germany to undertake design and manufacture to large size thermal sets upto a unit rating of 1000 MW in the year 1976.

First 200 MWTG set was commissioned at Obra in 1977. The continuum of technological advancement subsequently saw the commissioning of 500 MW TG Set in 1984 . The technical cooperation of Gas Turbine manufacture was also signed with M/s Siemens Germany. First 150 MW ISO rating gas Turbine was exported to Germany in Feb” 1995″. Our 250 MW thermal set up at Dahanu Plant of BSES made a history by continuous operation for over 150 days and notching up a record plant load factor greater than 100%. MAJOR COMPETITORS OF BHEL 1. ELECTRO CONSULT ITALY 2.

ABB SWITZERLAND 3. BEEHTEL USA 4. BLOCK & NEATCH USA 5. GENERAL ELECTRIC USA 6. RAYTHEON USA 7. WESTINGHOUSE USA 8. CNMI & EC CHINA 9. SANGHAI ELECTRIC CO UK 10. GEC-ALSTHOM UK 11.

ELECTRIM POLAND 12. FRANCO TOSI FRANCE 13. FUJI JAPAN 14. HITECHI JAPAN 15. MITSUBISHI JAPAN 16. TOSHIBA JAPAN 17. ROLLS ROYCE GERMANY 18. SIEMENS GERMANY

CUSTOMERS ? Karnath Govt. of J & K ? Gumti Govt. of Tripura ? Bhandardara-1 Govt. of Maharashtra ? Subbal Sindh Govt. of J & K ? Kali nadi Stage-1 Karnataka power corporation Ltd. ? Chibro UP Electricity Board ? Ukai Gujrat Electricity Board ? Chennai Govt. f J & K ? Tillari Govt. of Maharashtra ? Kadamparai Tamilnadu Electricity Board EXPORTS ? Devighat Govt. of Nepal ? Bhumibol Electricity Generating Authority, Thailand ? Pattani Electricity Generating Authority, Thailand ? Kulikhani Govt. of Nepal CONTRIBUTION TO POWER SECTOR ? Today the power sector plays a very important role in building any Nation. It helps the country to develop its economy and the life style of society. ? BHEL contributes 79% of the national power generation. In which 44% contribution is made only by BHEL Hardwar, 35% contribution is made by BHEL other than Hardwar unit and rest 21 % contribution made by other companies. TOTAL QUALITY FOCUS: To face the increased competition from MNCs (due to liberalization policy of Government) in early 90’s and to enter European market we moved towards ISO 9000 Certification. Concept of Business Excellence through EFQM Model was launched in entire BHEL on pilot scale in Oct. 1995″ In 1997 HEEP launched TQM in the entire Plant and since then Self-Assessment is done every year in September. Based on feedback Report of Assessment, critical success factors are identified and TQ action plans are drawn. The philosophy of ISO 9001, TQM and ISO 14001 has been integrated BHEL Hardwar for ultimately achieving “ BUSINESS EXCELLENCE”. HEEP Hardwar plant is

accredited for ISO 9001 and ISO 14001 and is now on March towards TQM. 5-S was launched in March 1999 in a big way and now it has become a way of life in the organisation.

In 2000 HEEP applied for CII-EXIM Business excellence award and site visit was conducted Bu CII team in Seot. “ 2000. Cii feedback has gone a log way in carrying out further improvement plans and giving a structured thrust to TQM movement In July 2001, Unit’s TQ Council reviewed the TQ Action Plans 2001-02 for its effectiveness and impact on accelerating the pace of improvement and consequent TQ Score. Executive Director laid the challenge of achieving the TQ score of 650. With an objective to bring awareness about he CII-EXIM Business Excellence Model amongst the Sr.

Executives, the first ‘ Top Management TQM Workshop’s held at Rishikesh during oct. 2001Executive Director who is TQ Assessor also, himself steered the Workshop with assistance from some experienced TQ Assessor of HEEP. It followed by second Top Management TQM Workshop steered again by Ed was held at HRDC on Oct’29, 2001. Subsequantly the third Top Management TQM Workshop was held in Nov’2001, where-in Sr. Counsellor, CII deliberate the detail on Best practices of TATA STEEL-the winner of ‘ CII-EXIM Business Excellence Award 2000’.

Simultaneously , TQ Assessors training program for the select group of young managers(to be developed as Think Tanks)was organized in Nov’2001. To give further boost Apex Group was formed. Apex Group developed “ Roadmap to Business Excellence” based on Criteria Linkage of CII-EXIM Business Model and the initiatives taken at Hardwar was drawn by the group

and it was widely circulated amongst the employees through special issue of Hardwar Current in April 2002. It followed by JBE workshop of Apex TQM Group held at Tehri on June 30 and July 1, 02 where-in following business policy and critical factors was evolved.

BUSINESS POLICY: “ In-line with Company’s Vision, Mission and values, we dedicate ourselves to sustained growth with increasing positive Economic Value Addition and Customer focussed business leadership in the Power and Industry Sector. CENTRAL FOUNDRY FORGE PLANT The Central Foundry Forge Plant was set up at Hardwar with French collaboration. The construction started in 1974 and production was commenced in 1976. This plant has in-built high degree of sophistication normally associated with much larger plants and has successfully developed various intricate castings and forgings which were imported earlier.

CFFP has successfully manufactured various types of steels, e. g. , creep resistant steels, heat resistant steels, stainless steels, armor steels etc. per Indian and International standards. CFFP has been supplying sophisticated castings used in power sector e. g. , steam turbine castings, turbo generator press rings, hydro turbine Kaplan blades and Francis runners, compressor castings etc. The castings have also been manufactured for Defense, Nuclear, Chemical and steel sectors. Critical Forgings manufactured by CFFP include: HP, IP and LP rotors and discs etc. from steam turbines, shafts, pole and plates, rotor bush, thrust collars etc. , for hydro sets and jackets and discharge cover for pumps besides various types of critical forgings for defense, nuclear, steel, cement and machine building industries. CFFP is further upgrading and augmenting its facilities in the high growth and high

technical areas. Most of the castings and forgings produced by CFFP are of import substitution nature. CFFP has also exported motor frame and steam turbine castings and forgings to CIS and Germany. CFFP has also won the National award for import substitution.

It has been recognized as a well known steel maker-Foundry and Forge Master by Indian Boiler Board. The American Bureau of Shipping has also approved CFFP for the manufacture of castings and forgings for ship building industry. FINANCIAL PROFILE OF BHEL BHEL's LAST 5 YEAR SUMMARY (In crores) 2006-072005-062004-052003-042002-03 TURNOVER 18738. 9514525. 4910336. 48662. 477482. 22 VALUE ADDED7182. 275682. 804254. 003680. 003247. 50 PBT3736. 072564. 401581. 601014. 80802. 40 DEBTORS9695. 827168. 065972. 124608. 484075. 78 CURRENT ASSETS, LOAN AND ADVANCES20312. 9716330. 7613342. 9610424. 698348. 8 CURRENT LIABILITIES & PROVISION14193. 4510130. 088322. 226244. 664676. 93 NET WORKING CAPITAL6119. 526200. 685020. 744180. 033671. 45 INTERPRETATION In last five years BHEL's Turnover increased from 7482. 22crores in 2002-03 to 18738. 95crores in 2005-06. The increase in % is 150. 44; it is the result of turnover and profit. Its Value Added has also showed a continuous increased from 3247. 50crores to 7182. 27 in 2002-03 to 2006-07 increase % being 121. 16. Its debtors showed an increasing trend, it continuously increased from 4075. 78crores in 2002-03 to 9695. 82 in 2006-07, 137. 89 being the overall increase %.

Current Assets, Loans and Advances increases from 8348. 28crores in 2002-03 to 20312. 97crores in 2006-07, increase in % is 143. 3. Current Liabilities and Provision has shown a continuous increase from 4676. 93crores in 2002-

03 to 14193. 45crores in 2006-07. Increase in % is 203. 47. Net working capital increases from 3671. 45crores in 2002-03 to 6119. 52crores in 2006-07, increase % being 66. 67. After viewing above data, we can say that overall performance of BHEL in last five years is quite satisfactory and it is continuously heading towards improvement. SHAREHOLDING PATTERN OF BHEL SL NO. CATEGORY%AGE OF SHAREHOLDING 005-062006-07 APROMOTER'S HOLDING PRESIDENT OF INDIA67. 7267. 72 BNON PROMOTER'S HOLDING a)MUTUAL FUNDS AND UTI4. 795. 08 b)BANKS, FINANCIAL INSTITUTIONS AND INSURANCE COMPANIES2. 523 c)FOREIGN INSTITUTIONAL INVESTORS22. 4219. 49 d)OTHERS -2. 554. 71 PRIVATE CORPORATE BODIES 1. 372. 81 INDIAN PUBLIC1. 091. 8 NRIs AND OCBs0. 060. 10 TRUST00 SHARE IN TRANSIT0. 030 TRAINING Employee training is a specialized function and is one of the fundamental operative functions of Human Resource Management. Acc to FLIPPO, " Training is the act of increasing the knowledge and skill of an employee for doing a particular job. It is a short-term educational process and utilizing a systematic and organized procedure by which employees learn technical knowledge and skills for a definite purpose. Training refers to the organization's efforts to improve an individual's ability to perform a job or organizational role. It can be defined as a learning experience in which it seeks a relative permanent change in an individual that would improve his ability to perform the job. DIFFERENCE BETWEEN TRAINING AND DEVELOPMENT Training and development go hand in hand and are often used synonymously but there is a difference between them.

Training is the process of learning a sequence of programmed behavior. It is an application of knowledge. It gives people an awareness of the rules and procedures to guide their behavior. It intends to improve their performance on the current job and prepares them for an intended job. Development is a related process. It covers not only those activities, which improve job performance, but also those, which bring about growth of the personality. It helps individual in the progress towards maturity and actualization of potential capabilities so that they can become not only good employees but better human beings.

PRINCIPLES OF TRAINING ? MOTIVATION Learning is enhanced when the learner is motivated. Learning experience must be designed so learners can see how it will help in achieving the goals of the organization. Effectiveness of training depends on motivation. ? FEEDBACK Training requires feedback. It is required so the trainee can correct his mistakes. Only getting information about how he is doing to achieve goals, he can correct the deviations. ? REINFORCEMENT The principle of reinforcement tells the behaviors that are positively reinforced are encouraged and sustained.

It increases the likelihood that a learned behavior well be repeated. ? PRACTICE Practice increases a trainee’s performance. When the trainees practice actually, they gain confidence and are less likely to make errors or to forget what they have learned. ? INDIVIDUAL DIFFERENCES Individual training is costly. Group training is advantageous to the organization. Individuals vary in intelligence and aptitude from person to person. Training must be geared to the intelligence and aptitude of individual trainee. OBJECTIVES OF TRAINING ? TO INCREASE PRODUCTIVITY

An instructor can help employees increase their level of performance on their assignment. Increase in human performance leads to increase in the operational productivity and also the increase in the profit of the company. ? TO IMPROVE QUALITY Better-trained workers are less likely to make operational mistakes. It can be in relationship to the company or in reference to the intangible organizational employment atmosphere. ? TO HELP A COMPANY FULFILL ITS FUTURE PERSONNEL NEEDS The organizations having good internal training and development programmes will have to make less changes and adjustments.

When the need arises, vacancies can be easily staffed. ? TO IMPROVE ORGANIZATIONAL CLIMATE An endless chain of positive reactions result from a well planned training programme. ? TO IMPROVE HEALTH AND SAFETY Proper training can prevent industrial accidents. A safer atmosphere leads to more stable attitudes on part of the employees. ? PERSONAL GROWTH Employees on a personal basis gain individually from their exposure to educational expressions. Training programmes give them wider awareness and skills. NEED FOR TRAINING ? To impart to the new entrants the basic knowledge and skills they need for definite tasks. To assist employees to function more effectively in their present positions by exposing them to new concepts. ? To build a line of competent people and prepare them to occupy more responsible positions. ? To reduce the supervision time, wastage and spoilage of new material. ? To reduce the defects and minimize the industrial accidents. ? To ensure the economical output of the required quality. ? To prevent obsolescence. ? To promote individual and collective morale, responsibility and cooperative attitudes etc. TYPES OF TRAINING Training is

required for several purposes. Accordingly training programmes may be of the following types: Orientation training: Induction or orientation training seeks to adjust newly appointed employees to the work environment. Every new employee needs to be made fully familiar with his job, his superiors and subordinates and with the rules and regulations of the organization. Induction training creates self-confidence in the employees. It is also knows as pre-job training. It is brief and informative. ? Job training: It refers to the training provided with a view to increase the knowledge and skills of an employee for performance on the job. Employees may be taught the correct methods of handling equipment and machines used in a job.

Such training helps to reduce accidents, waste and inefficiency in the performance of the job. ? Safety training: Training provided to minimize accidents and damage to machinery is known as safety training. It involves instruction in the use of safety devices and in safety consciousness. ? Promotional training: It involves training of existing employees to enable them to perform higher-level jobs. Employees with potential are selected and they are given training before their promotion, so that they do not find it difficult to shoulder the higher responsibilities of the new positions to which they are promoted. Refresher training: When existing techniques become obsolete due to the development of better techniques, employees have to be trained in the use of new methods and techniques. With the passage of time employee may forget some of the methods of doing work. Refresher training is designed to revive and refresh the knowledge and to update the skills of the existing employees. Short-term refresher courses have become popular on account of rapid changes in technology and work methods. Refresher or

re-training programmes are conducted to avoid obsolescence of knowledge and skills. METHODS OF TRAINING Fig – Methods of Training ON-THE-JOB TECHNIQUES On the job techniques enables managers to practice management skills, make mistakes and learn from their mistakes under the guidance of an experienced, competent manager. Some of the methods are as: •Job Rotation: It is also referred to as cross straining. It involves placing an employee on different jobs for periods of time ranging from a few hours to several weeks. At lower job levels, it normally consumes a short period, such as few hours or one or two days. At higher job levels, it may consume much larger periods because staff trainees may be learning complex functions and responsibilities.

Job rotation for managers usually involves temporary assignments that may range from several months to one or more years in various departments, plants and offices. Job rotation for trainees involves several short-term assignments, that touch a variety of skills and gives the trainees a greater understanding of how various work areas function. For middle and upper level management, it serves a slightly different function. At this stage, it involves lateral promotions, which last for one or more years. It involves a move to different work environment so that manager may develop competence in general management decision-making skills. Enlarged and enriched job responsibilities: By giving an employee added job duties, and increasing the autonomy and responsibilities associated with the job, the firm allows an employee to learn a lot about the job, department and organization. •Job instruction training: It is also known as step-by-step training. Here, the trainer explains the trainee the way of doing the jobs, job

knowledge and skills and allows him to do the job. The trainer appraises the performance of the trainee, provides feedback information and corrects the trainee.

In simple words, it involves preparation, presentation, performance, and tryout and follow up. • Coaching: The trainee is placed under a particular supervisor who functions as a coach in training the individual. The supervisor provides the feedback to the trainee on his performance and offers him some suggestions for improvement. Often the trainee shares some duties and responsibilities of the coach and relives him of his burden. A drawback is that the trainee may not have the freedom or opportunity to express his own ideas. •Committee assignments:

Here in, a group of trainees are given and asked to solve an actual organizational problem. The trainees solve the problem jointly. This develops team work and group cohesiveness feelings amongst the trainees. ? OFF-THE-JOB TRAINING It includes anything performed away from the employee's job area or immediate work area. Two broad categories of it are: •IN HOUSE PROGRAMMES These are conducted within the organizations own training facility; either by training specialists from HR department or by external consultant or a combination of both. •OFF-SITE PROGRAMMES

It is held elsewhere and sponsored by an educational institution, a professional association, a government agency or an independent training and development firm. The various off- the- job-training programmes are as follows: •Vestibule training: Herein, actual work conditions are simulated in a classroom. Material, files and equipment those are used in actual job

performance are also used in training. This type of training is commonly used for training personnel for clerical and semiskilled jobs. The duration of this training ranges from few days to a few weeks.

Theory can be related to practice in this method. •Role-playing: It is defined as a method of human interaction that involves realistic behaviour in imaginary situations. This method involves action doing and practice. The participants play the role of certain characters, such as production manager, HR manager, foreman, workers etc. This method is mostly used for developing interpersonal interactions and relations. • Lecture method: The lecture is a traditional and direct method of instruction. The instruction organizes the material and gives it to the group of trainees in the form of a talk.

To be effective, the lecture must motivate and create interest among the trainees. An advantage of this method is that it is direct and can be used for a large group of trainees. • Conference or discussion: It is a method in training the clerical, professional and supervisory personnel. It involves a group of people who pose ideas, examine and share facts and data, test assumptions and draw conclusions, all of which contribute to the improvement of job performance. It has an advantage that it involves two-way communication and hence feedback is provided.

The participants feel free to speak in small groups. Success depends upon the leadership qualities of the person who leads the group. •Programmed instruction: This method has become popular in recent years. The subject matter to be learned is presented in a series of carefully planned sequential

units. These units are arranged from simple to mere complex levels of instructions. The trainee goes through these units by answering questions or filling the blanks. This method is expensive and time consuming. EXECUTIVE DEVELOPMENT PROCESS

Executives are the people who shape the policies, make the decisions and see their implementation in any business organization. They are the president, the vice-president, the managing director, works manager, plant superintendent, controller, treasurer, office managers, engineers, directors of functions such as purchasing, research, personnel, legal, marketing etc. Executive development may be stated as the application of planned efforts for raising the performance standards of high level managers, and for improving the attitudes and activities that enter into or influence their work and their work relations.

EXECUTIVE DEVELOPMENT PROCESS Following are the steps, which are involved in the development process of executives: ? OBJECTIVES The first and foremost step is to define the long- term objectives of training and development of executives. ? STRENGTH AND WEAKNESS An inventory of managers is taken with special focus on their strength in terms of managerial skills and other attributes. Their unique capabilities, specialist knowledge and achievements are listed down against each. A comparison with the requirement of the organization will bring the gap in knowledge and skills of existing executive.

This is the weakness. ? LONG- RANGE PLANS Here the management prepares long-term training and development plans for their executives, which include

the annual training targets, the annual budgets and the specific area of training. ? SHORT- TERM PROGRAMME This programme specify the duration, starting time, ending time, number of executives being trained, identify the resources etc. ? IMPLEMENTATION The training programme envisaged before is put into operation. The actual training is initiated by proper timetable and other arrangements. ? EVALUATION

In this step, the effectiveness of the executive training programme is evaluated by measuring the improved performance of executives who underwent the programme, on their job. There are various criteria of measuring effectiveness such as validity, reliability etc. EVALUATING THE EFFECTIVENESS OF TRAININ An Investor in People evaluates the investment in training and development to assess achievement and improve future effectiveness. Kearns (1994) suggests that there are four groups of ‘ measures’ of training effectiveness, which are used by organization. The groups are as follows: -No Measurement -Subjective Measures -Qualitative Measures Objective Measures The first group, in which no real measurement occurs, includes activities undertaken as an “ Act of Faith”, where no form of measurement is attempted, such as initiatives to improve communications in organization, which seem to make people feel good and appear to have worked in some intangible manner. The second group includes subjective responses from trainees/course delegates, as exemplified by the “ Happy Sheet”. The main question asked is about how individuals feel after the training. Organizations often make the assumption that positive responses indicate training success and therefore value to the organization.

However, course delegates may well give strong positive response scores for a number of reasons, including the presentational skills of the trainer, the quality of the venue, and the “ feel good” factor of indulging in a creative work group, and so on. Quality measures appear to be more objective than the previous group, but are often flawed by subjectivity as well. They are typified by questionnaires asking delegates to “ put a value on” the likely benefits of a training programme. Objective measures are the only really meaningful ones.

However, they challenge the provider of training to demonstrate how their training activities feed through to the “ bottom line”: in terms of return on investment and return on the capital employed. There has often been an assumption, in times past, that training somehow “ justifies itself”, because it is all about developing people. However, it is incumbent on organizations to look critically at the ways in which they evaluate their training activities, lest they fall prey to the subject approach and are badly caught out when a rigorous analysis of all the functions of the organization’s business is called for.

A desirable, if not essential, characteristic of all training programmes is a built-in provision for evaluation. The four main dimensions of evaluation are: ? EVALUATION OF CONTEXTUAL FACTORS Training effectiveness depends not only on what happens during training, but also on what happens before the actual training and what happens after the training has formally ended. Evaluation should, therefore, be done of both the pre-training and post-training work.

Pre- training work includes proper identification of training needs, developing criteria of who should be sent for training, how many at a time and in what sequence, helping people to volunteer for training, building expectations of prospective participants from training etc. Post- training work includes helping the concerned managers to plan to utilize the participant's training, and provide the needed support to them, building linkages between the training section and the line departments and so on. ? EVALUATION OF TRAINING INPUTS

This involves the evaluation of the training curriculum and its sequencing. ? EVALUATION OF THE TRAINING PROCESS The climate of the training organization, the relationship between participants and trainers, the general attitude, and approaches of the trainers, training methods, etc are some of the important elements of the training process which also needs to be evaluated. ? EVALUATION OF TRAINING OUTCOMES Measuring the carry-home value of a training programme in terms of what has been achieved and how much is the main task of evaluation. This, however, is a complex technical and professional task.

Benefits of a training programme are not obvious and they are not readily measurable. Payoffs from training are intangible and rather slow to become apparent. A central problem is the absence of objective criteria and specific definitions of relevant variables by which to measure the effectiveness either of specific programmes or changes in employee behaviour. Nevertheless, the good personnel managers do make an effort to systematically appraise the benefits and results of their programmes. In job-related training, the

objective is to train people for specific job skills so that their productivity may increase.

Evaluation can be done either to the direct criterion of increase in output or to the indirect criteria of decrease in cost, breakage or rejects. Even more indirect are measures that point out changes in absenteeism or turnover. The most difficult problems of evaluation lie in the area of human relations skill training, which is given to the supervisors and middle- level managers. Supervisory and managerial training programmes are, for this reason, less amenable to objective review procedures. Much subjectivity enters into evaluations of these programmes, since exact standards and criteria are hard to devise.

THE EVALUATION MODELS The process of evaluating the training effectiveness involves the consideration of various constraints. Many researchers have developed various methods and models in order to facilitate this process. Some of the models are described as below: – CIRO MODEL OF EVALUATION Developed originally by WARR (1978), this theoretical model is based on evaluation being carried out at four different levels: Context Evaluation: Obtaining and using information about the current operational context i. e. about individual difficulties, organizational deficiencies etc. n practice, this mainly implies the assessment of training needs as a basis for decision. This involves: ? Examining the expectations and perceptions of the people. ? Examining whether the training needs were accurately identified. ? Putting the specific training event in the wider context of other training activities. ? Establishing whether the trainers enjoyed the confidence of the trainees and whether the latter are

comfortable with the level and focus of the training. Input Evaluation: Determine using factor and opinion about the available human and material training resources in order to choose between alternative training methods.

This involves: ? Establishing the adequacy of the resource base and its cost. ? Considering the choice and effectiveness of the training methods and techniques. ? Identifying the numbers who successfully completed the program compared with those who started and draw appropriate inferences. ? Establishing whether the trainers were perceived to be credible as far as the trainees are concerned. ? Establishing whether the psychological and emotional climate of learning was appropriate. Reaction Evaluation: Monitoring the training as it is in progress.

This involves continuous examination of administrative arrangements and feedback from trainees. This involves: ? Looking at the reactions of trainees to the content and method of training. ? Establishing the reaction of other people, particularly line managers to the early results of the training program. ? Discussing the views and observations of the trainers. Outcomes: It implies the measuring of the consequences of training. This involves: ? Establishing whether expectations of results were met. ? Identifying whether all or some of the learning objectives were met. Finding out what were the end course views about the training. The three levels of outcome evaluation may be distinguished: Immediate Outcomes: The changes in the trainee's knowledge, skills and attitude that can be identified immediately after the completion of training. The aim here is to find out the extent to which positive transfer of learning has taken place from the training to the workplace. This type of evaluation may be done in several ways such as

behaviourally anchored rating scales or self repots supplemented by reports of subordinates, peers and supervisors or critical incidents etc.

Intermediate Outcomes: These are the changes in trainee's actual work behaviour, which result from training. The assumption here is that effective training should be reflected in the trainee's increased job-proficiency. Ultimate Outcomes: These are the changes in the functioning of part or the entire organization, which have resulted from changes in work behaviour. For this purpose, indexes of productivity, labour turnover etc, studies of organizational climate and human resource accounting are taken as the ultimate results achieved by the trainee. HAMBLIN'S MODEL Hamblin (1974) said, " The purpose of evaluation is control".

A well controlled training program is one in which the weakness and failures are identified and corrected by means of the negative feedback and strengths and successes and corrected by means of the positive feedback. The processes, which occur as a result of a successful training programme, can be divided into 4 levels. The evaluation can be carried out at any of the following levels: ? Reaction Level: It measures the reactions of the trainees to the content and methods of the training, not the trainer, and to any other factors perceived as relevant. It determines what the trainee thought about the training. Learning Level: It measures the learning attitude of the trainees during the learning period. It collects information that did the trainees learn what was intended. ? Job Behavior Level: The job behavior of the trainees in the work environment at the end of the training period i. e. did the training got transferred to the job? ? Effect on the Department: Has the training helped the trainees in improving the department's performance? ? The

Ultimate Level: It measures that has the training affected the ultimate well being of the organization in terms of the business objectives. Fig – Flowchart of Hamblin's Model

MODEL USED IN THIS REPORT FOR EVALUATION AND RECOMMENDATIONS The Kirkpatrick Model establishes the effectiveness in terms of assessing the extent to which the objectives are met. Combining the four levels of this model and an optimum cost benefit strategy would enable the management to ascertain the extent to which a programme is contributing to the effectiveness of the organization. Therefore, this technique is used to identify and recommend certain measures in order to improve the training effectiveness at BHEL. The details of Kirkpatrick Model are explained in the succeeding paragraph.

THE KIRKPATRICK MODEL Perhaps the most influential approach to training evaluation was developed by D. L. KIRKPATRICK (1975) which, according to Bornbrauer (1987), despite its age and common sense approach to the subject, remains valid: " because of its comprehensiveness, simplicity, and applicability to a variety of training situations. " •LEVEL ONE-REACTION This level in the Kirkpatrick model is seen to offer some useful insights into the early experiences of trainees, but precisely because it is concerned with " feelings" and first reactions, the results need to be viewed with some caution.

Measurement can be done through: Reaction sheets: Reaction sheets (often refereed to as ' happy sheets') should ask questions about the achievement of the course objectives, about the course material, the presentation, the

activities used, the venue and the pre-course material. Group discussion: Build in time at the end of the course for how they will take the learning forward. Have them record the main points of the discussion for you to take away. Thumbs up, thumb down: This is much focused on reaction. Ask closed questions about the training course directed to the whole group.

If participants feel the answer to the question is ‘ Yes’ they give a thumbs-up sign, if the answer is ‘ No’, it’s a thumbs down. You need to record the number of responses, positive or negative, to each question. •Level Two- Learning This is the level at which “ new learning” is generated and which requires evaluators to try to establish individual’s progress towards the learning of specified skills and competencies. Measurements can be done through: Reaction sheets: Questions about what participants feel they have learnt during the course can be included on the reaction sheets.

Post-courses review: Delegates should meet with their lime manager soon after the course to discuss what learning has taken place and how this will be applied. They should then meet at agreed intervals to review how much progress is being made. Action plans: By requiring delegates to complete action plans at the end of course, we imply that we are expecting them to implement some learning from the course and make some changes in the way they work. •LEVEL THREE- EFFECTS ON INDIVIDUAL PERFORMANCE Recognizing that the purpose of training is to create new job capabilities means that evaluation must be extended to the working environment.

Above all, this level of evaluation draws attention to the fact that training does not end at the completion of the training programme, but has to

embrace issues such as the transfer of training, support for the use of new skills and competences and the support provided by line managers. Measurement can be done through: Post- course review with line manager: Delegates should meet with their lime manager soon after the course to discuss what learning has taken place and how this will be applied. They should then meet at agreed intervals to review how much progress is being made.

Follow-up questionnaire: The trainer circulates a questionnaire to all delegates and their managers asking questions about how the learning from the course is being applied. Follow-up calls: The trainer, or a nominated person, chooses a random sample of delegates from a course and then contacts them and their line managers to ask a series of questions about the application of learning from the course. Re-testing: If the training is very skills- based and has culminated with a test, it is possible (although time-consuming) to re-test delegates on regular basis and then to retrain if necessary. LEVEL FOUR- EFFECTS ON ORGANIZATIONAL PERFORMANCE The ultimate level and one that represents an attempt to establish what is often described as the impact of training on the “ bottom line” must be measured. As with level three evaluations, in order to assess the effects of training on an organization, measures need to be taken prior to the training being carried out. Examples of such measures are: Staff attitude surveys ? Profit levels ? Wastage ? Levels of consumables used’ ? Accidents and damage rates ? Customer complaints ? Working rates ? Error rates ? Work outstanding ? Task completed per hour/day/week Self-assessment of performance by team members TRAINING PROGRAMMES IN BHEL BHEL

follows the philosophy to establish and build a strong performance driven culture with greater accountability and responsibility at all levels. To that extent the Company views capability as a combination of the right people in the right jobs, supported by the right processes, systems, structure and metrics. The Company organizes various training and development programmes, both in-house and at other places in order to enhance the skills and efficiency of its employees. These training and development programmes are conducted at various levels i. . for workers and for officers etc. VARIOUS TRAINING PROGRAMMES ORGANISED FOR THE WORKERS IN BHEL:- S. noTraining ProgrammesDurationConducted by 1ISO 9000 and ISO 14000 refresher programme1 dayWorker teachers 2Personality development2 daysWorker teachers 3Worker teacher’s day1 dayWorker teachers 4ISO 14000 awareness? dayWorker teachers 5National safety day1 dayWorker teachers 6Fire fighting? daySecurity officer 7Worker’s participation in management3 daysCentral board of worker’s association 8Educational trip to Nainital, Rishikesh, Dehradun7 daysWorker teachers 9Gemba- Kaizen workshop5 daysKaizen institute 0Security and fire fighting1 dayWorker teachers 11Positive approach1 dayWorker teachers 12Vipassana meditation2 daysVipassana Sadhna Sansthan 13Worker’s children-Workshop for young people, personality development1 dayShakuntala Anand TRAINING IN BHEL BHEL provides training to all its employees as per the policy of the organization. PURPOSE OF TRAINING: To ensure availability of trained manpower. SCOPE: All categories of employees FLOW CHART OF TRAINING PROCEDURE Fig: – The training procedure IDENTIFICATION OF NEEDS

MANAGEMENT STAFF The Performance Appraisal form of the organization has a section in which the training and development needs are filed up. The person whom the concerned employee is reporting fills the Performance Appraisal form annually. Such person may be a branch head or department head. Identification of training need is done at the Executive Office (EO) level for the managers through the Performance Appraisal forms annually and the records are maintained at the Executive Office. Managers are nominated for the various training courses by the Executive's Office.

Managers may also be nominated to certain training programmes from the branch if the subject's covered are found to be of interest or if they offer a learning opportunity in some emerging areas of knowledge. Training needs for the department through their Performance Appraisal forms identifies the officers, which are filled in by the department head. The Performance Appraisal forms thus give the emerging training needs. This exercise is carried out annually. STAFF AND WORKERS Training needs for staff and workers are identified based on: – Company's strategy and policy. Organizational Thrust Areas. -New Emerging Areas. This together gives the consolidated system of needs that is prepared by the Personnel Officer and approved by the Department Head. PREPARATION OF TRAINING PLAN On the basis of identified training needs, the annual training calendar is prepared by the Personnel officer and approved by the Personnel Head. Annual Training Budget is prepared by Branch Personnel Head and is approved by Executive Office. This gives the final list of training activities in a particular year.

It is attempted to carry out all the programmes to fulfill the identified needs. The Head of the Personnel Department monitors the actual training

conducted vis-a-vis the identified training needs on a monthly basis. IMPARTING OF TRAINING Actual training is imparted with the help of in-house and outside agencies. The selection of these agencies is done on the basis of reputation; programmes offered by them, past experience and feedback received from the earlier participants. Training is also imparted by nominating the concerned employee for an external training programme.

All records of the training are maintained at branch as per Record of Training in the Personnel folder and the same is intimated to the Executive Office Personnel through the Monthly Personnel Report. FEEDBACK A feedback is taken from the participants through a questionnaire on the programme and their impressions in order to further improve upon the same. There are three such questionnaires available and one of these is used depending upon the nature of the training programme and the level of participants.

Also, a person from the personnel department sits through the final session of the programme and takes the verbal feedback about the programme. INDUCTION TRAINING STAFF/ OFFICERS/ MANAGERS This is carried out as the very first step for any new entrant into the branch at the Staff/ Officer/ Manager level. The department prepares a schedule for the employee as per which he is required to spend specific time in each department. During such period, he is reporting to the respective department head. The objective of the induction programme is to familiarize the participant to the function of different department.

The copies of the same are sent to the General Manager and all concerned. At the end of the induction, the trainee has to submit a report to the

Personnel Department. WORKERS In the case of a new entrant, he is called in General shift for 2 days for training under a senior worker to familiarize him with the welfare facilities like card punching, canteen, public conveniences, rules and regulations, standing orders, shift timings, spell outs, medical facilities, leave procedures etc. After two days of training, he is deployed in the concerned department.

The Personnel Officer organizes this. MANAGEMENT TRAINEE'S TRAINING Management trainees are given a fortnight of induction programme. Corporate HR advises it as per Management Trainee Training programme designed by them. Thereafter, a detailed training programme is carried out whereby the incumbent is to understand in depth of working of each department at various locations as per the programme given by the Corporate HR. Corporate HR maintains all relevant records pertaining to Management Trainee's training at Bangalore. TRAINING EFFECTIVENESS

For each training programme conducted in-house for BHEL Delhi branch personnel, a training brochure is developed. The brochure developed consists of the following information: Programme objectives: Need of the training and what are the objectives that this training aims to achieve, what likely outcomes are expected to come out of impact of this training. Programme content: Topics being covered during the training. -Methodology adopted. -Programme faculty. -Personnel to be covered. -Training methodology. -Training effectiveness criteria and scale.

The training effectiveness is measured by measurement of the achievement of the objectives. This lists down the measurement indicators, achievement

of which will ensure that programme objectives are achieved. A person gets nominated for the training programme in the following two ways: a)Training programme flowing from the training needs. b)Training programme for testing out the training/ increased awareness/ general information/ omnibus training types etc. TRAINING PROGRAMMES FLOWING FROM TRAINING NEEDS: The programmes are divided into three broad categories: Functional -Behavioral -General/ Omnibus programmes 1. Functional: The outcome of the training is measured by comparing the data pre-training and post-training. A scale is developed for measuring the effectiveness of training based on the % achievement of the objectives. 2. Behavioral: The effectiveness of the training of this nature is measured annually. This is seen through the training need identification for the coming year for the employee. If the training need is repeated there, then the training provided is taken as ineffective.

If the training need is repeated but with focus on a part of the need, then the training is partially effective. If not repeated, then the training is effective. 3. General: These are the training needs flowing directly from the organizational needs. Examples of these can be ISO 9000 training, ISO 14000 training and any awareness training. These are omnibus training programmes, which are run for a large number of employees. The effectiveness of the training is measured by: – – Achievement of those organizational objectives within the time lines. – Number of audit issues raised on the areas covered in the training. – – Any other such thing as defined in the training brochure. The effectiveness of the outside training programme is measured on the same line as above. However, no detailed

brochure is prepared for the same. The measurement criterion for the programme is defined in the beginning of the programme and effectiveness measured against the same. A consolidated effectiveness report of the training programme is prepared at the end of the year. The programmes that are found to be ineffective are reworked.

Training programme for testing out the training Also there are training programmes, which are not flowing directly from the training needs measurement of effectiveness of the training is not needed to be measured. TRAINING OF AN OFFICER Fig. Flowchart for Training of an Officer TRAINING OF A WORKER Fig – Flowchart for Training of a Worker RESEARCH OBJECTIVES OBJECTIVES OF THE STUDY The first & foremost step in any research work is to identify the problems or objectives on which the researcher has to work on. There are two types of objectives met in this study, as explained MAJOR OBJECTIVE To analyze the existing training practices, its effectiveness and recommend measures to improve the training practices in BHEL. MINOR OBJECTIVES ? To study the frequency of training, training methods and their effects on the trainees and recommend certain measures for improvement. ? To understand the present practices enforced in respect of training at the personnel department and recommend any changes if necessary. ? To take feedback and analyze the level of satisfaction amongst the employees in respect of training activities and suggest alternatives. RESEARCH METHODOLOGY

Every project work is based on certain methodology, which is a way to systematically solve the problem or attain its objectives. It is a very important guideline and lead to completion of any project work through

observation, data collection and data analysis. According to Clifford Woody, “ Research Methodology comprises of defining & redefining problems, collecting, organizing data, making deductions to conclusions. ” Accordingly, the methodology used in the project is as follows: – ? Defining the objectives of the study ? Framing of questionnaire keeping objectives in mind (considering the objectives) ?

Feedback from the employees ? Analysis of feedback ? Conclusion, findings and suggestions. SELECTION OF SAMPLE SIZE In order to take a reasonable sample size and not to disturb the functioning of the organization, a sample size of reasonable strength of the Company has been taken in order to arrive at the present practices of training in the Company. Accordingly, 20 officers and 40 workers have been selected at random from all the departments of the organization and feedback forms (questionnaire) have been obtained. The data has been analyzed in order to arrive at present training practices in the organization. SAMPLING TECHNIQUE USED

The technique of Random Sampling has been used in the analysis of the data. Random sampling from a finite population refers to that method of sample selection, which gives each possible sample combination an equal