

# **CHAPTER :4**

## **HUMAN RESOURCE MANAGEMENT AND CONTROL**

**Meaning and functions of human resource management**

**Recruitment**

**Job analysis, Job specification, Job description**

**Elements of compensation**

**Human resource development: Training (on the job and off the job)**

**Performance appraisal**

**Challenges in Managing People in the ICT Workforce**

**Importance of Control in ICT Management**

**Process and Types of Control**

**Techniques for Effective Control**

**ICT Tools for Effective Control of Engineering Projects and Organizations**

# HUMAN RESOURCES: MEANING

Human resources means the collection of people and their characteristics at work. These are distinct and unique to an organization in several ways.



# HUMAN RESOURCE MANAGEMENT

- It is management of human energy and capabilities.
- It is concerned with managing people in an organization.
- It is the process concerned with the management of human energies and competencies to ensure competent and committed workforce to achieve organizational goals in a changing environment.

According to Donnely and Gibson,

- HRM is the process of accomplishing organizational objectives by acquiring, retaining, terminating, developing and properly using the human resources in an organization.

# HUMAN RESOURCE MANAGEMENT

## Why is it difficult to effectively manage people?

Uniqueness of  
People



Unpredictable

Difficulty to  
motivate



Unending Needs

Complexity



# HUMAN RESOURCE MANAGEMENT

## **What is Human Resource Management (HRM)?**

**Human Resource Management includes all activities used to attract & retain employees and to ensure they perform at a high level in meeting organizational goals.**

### **These activities are made up of:**

1. Recruitment & selection.
2. Training and development.
3. Performance evaluation.
4. Pay and benefits (compensation).
5. labor relations.



# PROCESS OF HRM/FUNCTIONS

Acquisition ➡ Development ➡ Utilization ➡ Maintenance

- HR Planning
- Job Analysis & Design
- Recruitment
- Selection
- Placement
- Socialization



Ensures Entry  
of Right  
People

- Needs Assessment
- Training
- Management Development
- Career Development



Ensures  
Competencies  
and quality of  
employees

- Job Design
- Motivation
- Performance Appraisal
- Reward Management



Ensures  
Motivation  
and improve  
productivity

- Labor Relation
- Employee Discipline
- Grievance Handling
- Welfare
- Termination



Ensures  
Retention of  
employees



# CHARACTERISTICS OF HRM

- People oriented
- Action- oriented
- Individual- oriented
- Development – oriented
- Pervasive Function
- Continuous Function
- Future- oriented
- Challenging function
- Science as well as art
- Staff function
- Young discipline
- Nervous system





# OBJECTIVES OF HRM

- To act as a liaison between the top management and the employees.
- To arrange and maintain adequate manpower inventory
- To devise employee benefit schemes
- To ensure and enhance the quality of work life
- To offer training
- To help keep up ethical values and behaviour amongst employees both within and outside the organization.
- To maintain high morale and good human relations within the organization.





# RECRUITMENT

- ❑ Process of searching and obtaining potential employees to facilitate the selection of the right person for the right job.
- ❑ Pre-requisite: Job Analysis, Job Description and Job specification

## Sources:

- ❑ Internal source: within organization .Eg. Internal promotion or competition.
- ❑ External source: from outside the organization. Eg. Advertisement



# METHODS OF RECRUITMENT

## 1. Internal methods of recruitment

- Promotions and transfers:
- Job posting:
- Employee's referrals:
- Human resource inventory search

## 2. Indirect methods

**Advertising:** This is widely used method. Its media can be newspaper (print media); billboard or poster (visual media); radio (audio media); or television, cinema (audiovisual media). Advertising can be want ads or blind box ads.



# METHODS OF RECRUITMENT

## 3. Third party recruitment

- Employment agencies/exchange: They can be operated by the government; by nonprofit organization, or by privately owned agencies.
- Employee referrals: Current employees recommend their friends and relatives from outside the organization for hard-to-find job skills.
- Write-ins: They send written enquiries in search of job.
- Cyberspace: Prospective candidates send their bio-data through internet
- Trade unions: They serve as job referrals for recruitment of semi-skilled workers
- Other external methods: gate hiring, Labor contractors; older workers; retired Human resource; etc.



# SELECTION

- Matching the needs of job with candidate's qualification and matching the goals and needs of candidate with job.
- Selecting the most suitable candidate for the position among the prospective applicant.

## Steps of Selection Process:

- Application form evaluation
- Preliminary interview
- Selection tests
- Reference checks
- Selection interview
- Medication test
- Hiring decision



# JOB ANALYSIS

- Collection of tasks, duties and responsibilities of any job which is regarded as a regular assistant to the individual employee.

## Steps:

- Identify information to be collected.
- Identify sources of obtaining information.
- Choose appropriate method of collecting information.



# JOB ANALYSIS

## Techniques:

- Personnel Observation
- Interview Method
- Questionnaire Method
- Diary Method
- Technique Conference Method



# JOB ANALYSIS

## □ Components:

### ● **Job Description:**

It is the written record of duties, responsibilities, required authority of particular job. It is the profile of job. Job description includes

Title and level of job

location

working condition

Job summary

authority and accountability

relationship with others etc.





# JOB ANALYSIS

## □ Components:

### ● **Job Specification:**

A standard of personnel and designates the quality required for an acceptable performance.

A statement of the minimum acceptable human qualities necessary for the proper performance of the job. It provides the following information.

- Education and training
- Experience
- Physical health
- Skills
- Communication, computer and driving, etc
- Abilities (physical and mental)
- Maturity (capacity to assume responsibilities)



# HUMAN RESOURCE DEVELOPMENT (HRD)

## □ Training:

- Act of increasing the knowledge and skills in an employee for doing a particular job.
- Enhance capabilities to improve job performance.
- Gives new skill, technical knowledge, problem solving ability.

## □ Features of Training:

- Increases knowledge and skills for doing a particular job
- Focuses attention on the current job
- Concentrates on individual employees



# BENEFITS OF TRAINING

- ❑ Helps employees to perform their job effectively
- ❑ Helps to prepare existing employees for higher level jobs
- ❑ Aids productivity and quality improvements
- ❑ Enhance employee morale and job satisfaction
- ❑ Improves labor relations and organizational climate
- ❑ Better safety; reduces accidents
- ❑ To make employees more mobile and versatile



# HUMAN RESOURCE DEVELOPMENT (HRD)

## ▣ Methods of Training:

### **1. Induction training**

For new employee to learn rule, policies of organization.

### **2. Training for promotion**

#### ▣ **On the job training**

Learning while working under the supervision of experienced employee.

#### ▣ **Off the job training**

Outside the work situation for the specific time periods.

Methods: Lecture conference, Simulation/Computer exercise, Experimental exercise



# HUMAN RESOURCE DEVELOPMENT (HRD)

## **3. Apprentice training**

Beginners are educated and trained in various jobs till they join with full salary.

Eg. Plumbers, Electricians

## **4. Vestibule training**

Before placing the job training pertains to the trainees of employees separately.

Eg. Staff College



# HUMAN RESOURCE DEVELOPMENT (HRD)

## **5. Internship training**

It is provided to skilled and technical Human resource. The trainee is interned in organization for a specified period and works as an employee. Students of technical subjects generally undergo internship training.

## **6. Simulation training**

Simulation is abstraction of real work conditions in the lab or classroom. The trainee is placed in an artificial environment that closely resembles actual working conditions. Computer modeling is an example. Airlines use simulation to train pilots.



# PERFORMANCE APPRAISAL

Systematic formal evaluation of an employee's performance on the job and his potential for assuming future responsibilities.

Evaluates contribution of each employee to achieve organization goal.

According to Edwin B Flippo,

“Performance appraisal is a systematic, periodic and so far as humanly possible, an impartial rating of an employee's excellence in matters pertaining to his present job and to his potentialities for a better job”.





# PERFORMANCE APPRAISAL

## □ Types:

- Formal performance appraisal

At periodic intervals, compare actual performance with standard performance

- Informal performance appraisal

Through Informal sources

## □ Importance:

- For promotion, Reward, Compensation and Punishment
- Identifying training needs, match employee with job.



# PRINCIPLES OF PERFORMANCE APPRAISAL

- ❑ Single employee is rated by two raters.
- ❑ Continuous and Personal observation of an employee is essential to make effective performance appraisal.
- ❑ The rating should be done by an immediate superior of an subordinate in an organization.
- ❑ A separate department may be created for effective performance appraisal.
- ❑ The rating is conveyed to the concerned employee.
- ❑ The plus points of an employee should be recognized. At the same time, the minus point should not be highlighted too much.



# PRINCIPLES OF PERFORMANCE APPRAISAL

- ❑ The management should create confidence in the minds of employees.
- ❑ The standard for each job should be determined by the management.
- ❑ Separate printed forms should be used for performance appraisal to each job according to the nature of the job.



# OBJECTIVE OF PERFORMANCE APPRAISAL

- To determine the effectiveness of employees on their present jobs so as to decide their benefits.
- To identify the shortcomings of employees so as to overcome them through systematic guidance and training.
- To find out their potential for promotion and advancement.



# PERFORMANCE APPRAISAL

## □ Methods:

### A. Traditional Method

#### 1. Ranking Method:

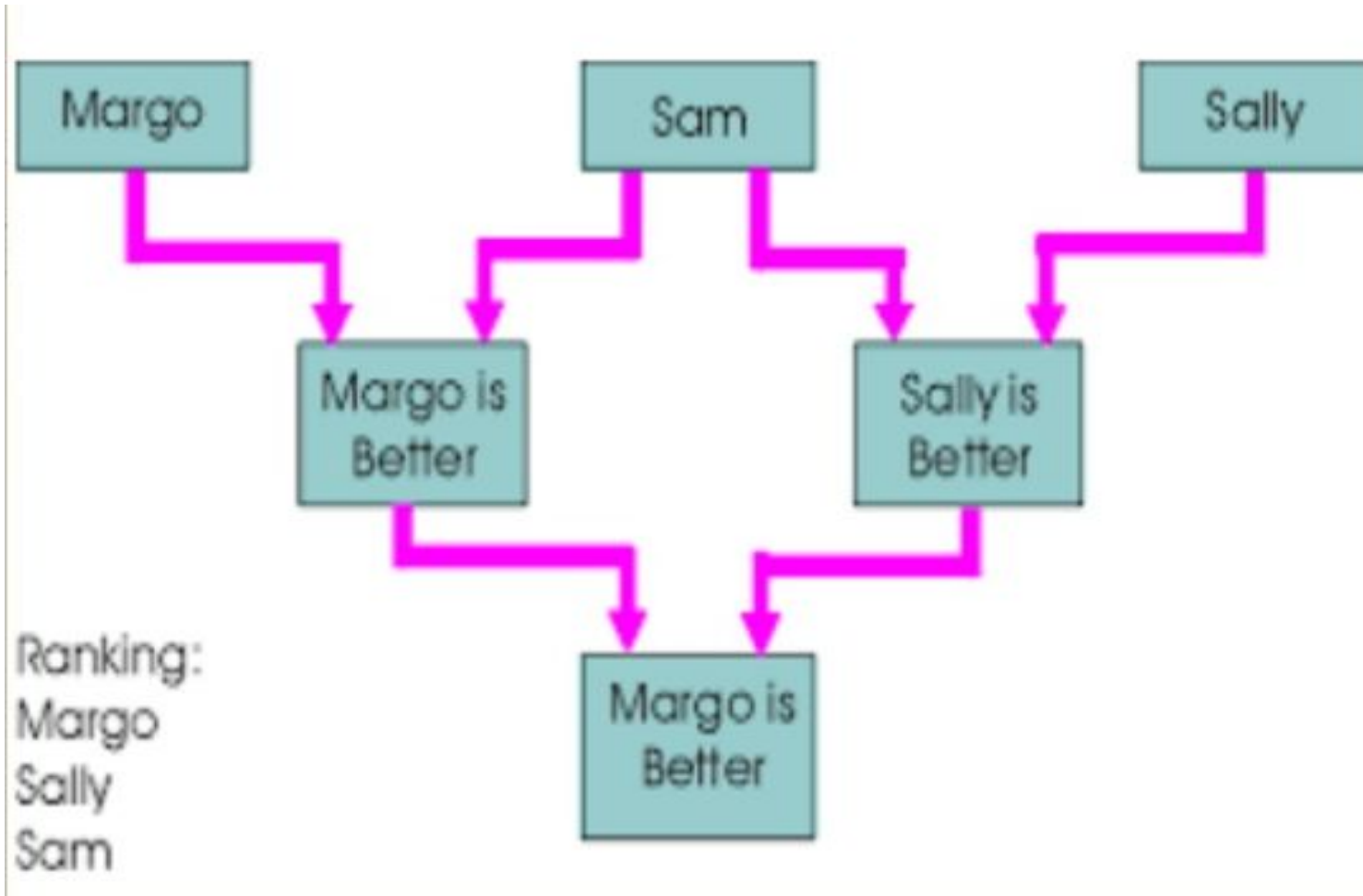
An employee is ranked against the other in the working group under this method. Ranked 1,2,3..... in a group. It is useful in small organization.

#### 2. Person to Person comparison:

Each employee is compared with other employees taking only one at a time. The evaluator compares two employees and puts a tick mark against an employee whom he considers a better employee. This method is suitable for big organization.



# PERFORMANCE APPRAISAL



**Person to Person comparison:**



# PERFORMANCE APPRAISAL

## □ Methods:

### A. Traditional Method

#### 3. Grading method:

Certain categories of abilities or performance of employees are defined well in advance to fall in certain grades under this method. Such grades are very good, good, average, poor and very poor or similarly unsatisfactory, fair, satisfactory, good, outstanding.





# PERFORMANCE APPRAISAL

	Unsatisfactory	Fair	Satisfactory	Good	Outstanding
<b>Quantity of work:</b> Volume of work under normal working conditions					
<b>Quality of work:</b> Neatness, thoroughness and accuracy of work <b>Knowledge of job</b>					
<b>Knowledge:</b> A clear understanding of the factors connected with the job					
<b>Attitude:</b> Exhibits enthusiasm and cooperativeness on the job					
<b>Dependability:</b> Conscientious, thorough, reliable, accurate, with respect to attendance, reliefs, lunch breaks, etc.					
<b>Cooperation:</b> Willingness and ability to work with others to produce desired goals.					

Grading method:



# PERFORMANCE APPRAISAL

## □ Methods:

### A. Traditional Method

#### 4. Free Essay Method:

Supervisor makes free form, open ended appraisal of an employee over the entire evaluation period by writing a narrative detailing the strength and weaknesses. This essay is based on qualitative impression on the rater.

1.



# PERFORMANCE APPRAISAL

## ▣ Methods:

### A. Traditional Method

#### 5. Rating scale method: Subjective evaluation

- ▣ Factors:
  - ▣ Quality and quantity of work
  - ▣ Job knowledge
  - ▣ Attendance and appearance
  - ▣ Loyalty and dependability
  - ▣ Honesty and Integrity
  - ▣ Attitude, Initiative Cooperation



# PERFORMANCE APPRAISAL


## □ Methods:

### B. Modern Methods:

- Appraisal by Result
- Based on how well the time bound objectives have been accomplished.
- This emphasis on the results not the activities.



## LIMITATIONS OF PERFORMANCE APPRAISAL

- ❑ The performance appraisal methods are unreliable.
  - ❑ If an employee is well known to an employer, the performance appraisal may not be correct.
  - ❑ The inability of supervision to appraise an employee does not bring out accurate performance appraisal.
  - ❑ Some qualities of an employee can not be easily appraised through any performance appraisal method.
  - ❑ A supervisor may appraise an employee to be good to avoid incurring his displeasure.
  - ❑ Uniform standards are not followed by the supervisors in the performance appraisal.
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# CHALLENGES IN MANAGING PEOPLE IN THE ICT WORKFORCE

- ❑ **Skill Shortages** – Rapid technological changes require constant upskilling.
- ❑ **Retention and Turnover** – High demand for ICT professionals leads to frequent job switching.
- ❑ **Remote Work Management** – Ensuring productivity and communication in virtual teams.
- ❑ **Cultural Diversity** – Teams often consist of professionals from different backgrounds.
- ❑ **Cybersecurity Concerns** – Training employees on security best practices.
- ❑ **Work-Life Balance** – Managing stress and burnout in high-pressure environments.
- ❑ **Resistance to Change** – Employees may resist new technologies and workflows.



# IMPORTANCE OF CONTROL IN ICT MANAGEMENT

- ❑ Ensures project success by maintaining timelines and budgets.
- ❑ Helps in monitoring performance and identifying bottlenecks.
- ❑ Reduces risks associated with software development and deployment.
- ❑ Ensures compliance with security and regulatory standards.
- ❑ Enhances quality assurance by identifying defects early.





# PROCESS AND TYPES OF CONTROL

## ▣ **Control Process:**

**Setting Performance Standards** – Define objectives and expected outcomes.

**Measuring Performance** – Use KPIs and metrics to track progress.

**Comparing Results** – Analyze performance against set benchmarks.

**Taking Corrective Action** – Implement solutions for deviations.



# PROCESS AND TYPES OF CONTROL

## ▣ **Types of Control:**

**Preventive Control** – Proactive measures to avoid risks (e.g., cybersecurity training).

**Detective Control** – Identifying and reporting issues (e.g., system logs).

**Corrective Control** – Actions taken to fix problems (e.g., debugging software).



# TECHNIQUES FOR EFFECTIVE CONTROL

- ❑ **Budgetary Control** – Monitoring project costs and financial planning.
- ❑ **Quality Control** – Ensuring products meet specified standards.
- ❑ **Performance Evaluation** – Regular assessments of employee and system performance.
- ❑ **Risk Management** – Identifying and mitigating potential threats.
- ❑ **Automation & AI Monitoring** – Using automated systems for error detection.



# ICT TOOLS FOR EFFECTIVE CONTROL OF ENGINEERING PROJECTS AND ORGANIZATIONS

## ❑ 1. Project Management Tools:

**Jira, Trello, Asana** – Track tasks, deadlines, and team progress.

## ❑ 2. Communication & Collaboration Tools:

**Slack, Microsoft Teams, Zoom** – Enable seamless team communication.

## ❑ 3. Quality Assurance & Testing Tools:

**Selenium, JMeter, TestRail** – Ensure software quality through automated testing.

## ❑ 4. Version Control Systems:

**Git, GitHub, Bitbucket** – Manage source code and track changes.

## ❑ 5. Cybersecurity & Compliance Tools:

**Firewalls, SIEM systems, Antivirus Software** – Protect data and networks.



**Thank You**