A STUDY ON PRODUCTION PLANNING AND STOCK MAINTANANCE AT GEM MANUFACTURERS PRIVATE LIMITED

SUMMER PROJECT REPORT
Submitted to the
Faculty of Management Sciences, Anna University
In partial fulfillment of the requirement
For the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

By

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DEPARTMENT OF MANAGEMENT STUDIES
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BONAFIDE CERTIFICATE

Certified that this project titled "**A STUDY ON PRODUCTION PLANNING AND STOCK MAINTANANCE AT GEM MANUFACTURERS PRIVATE LIMITED**" is the bonafide work of **MISS. P. KAVITHA (71205631028)** who carried out this research under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Faculty Guide 15/11/06

Prof. S. GANESAN
Director

Evaluated and viva-voce conducted on.....15/11/06.....

Examiner (1) 15/11/06

Examiner (2)

DECLARATION

I, hereby declare that this project report entitled as "A STUDY ON PRODUCTION PLANNING AND STOCK MAINTANANCE AT GEM MANUFACTURERS PRIVATE LIMITED" AT COIMBATORE has been undertaken for academic purpose submitted to Anna University in partial fulfillment of the requirements for the award of the degree of Master of Business Administration. The project report is the record of the original work done by me under the guidance of Senior lecturer Mr.Prem kumar during the academic year 2006 – 2007.

I, also declare hereby, that the information given in this report is correct to best of my knowledge and belief.

Place : coimbatore

Date : 06/11/06

Signature of the candidate

.....

GEM MANUFACTURERS PRIVATE LIMITED

TO WHOMSOEVER IT MAY CONCERN

his is to certify that Ms. P. Kavitha, II M.B.A student from umaraguru College of Technology, Coimbatore. She has done a roject title of "A Study On Production Planning and Stock Maintenance" in ur company from 01.07.2006 to 09.08.2006.

uring the above period her conduct and character where found o be good.

For GEM MANUFACTURERS PVT. LTD.

(V. S, THIYAGARAJAN)
Senior Manager (Admn.)

lace : Coimbatore

ate : August 9, 2006

ACKNOWLEDGEMENT

Words are inadequate to express my heartfelt gratitude to "Almighty God" for the glorious blessing, infinite mercy, abundant love and spiritual guidance throughout my life.

I express my sincere gratitude to our beloved correspondentProf. Dr. K. Arumugam, the prime guiding sprit of Kumaraguru College of technology.

I extend my heartfelt thanks to Principal Dr.Joseph V.Thanikal, Kumaraguru College of Technology, for providing facilities to do this project.

I express my sincere gratitude and thanks to our Director Dr.SGaneshan for permitting me to carry out the project.

I endeavor my sincere gratitude towards my guiding spiritSenior lecturer Mr.Prem kumar, who has extended his guidance throughout this project.

I extend my sincere thanks and gratitude toGEM manufacturing concern for permitting me to do the project. Specially, I would like to thank MrV S Thiyagarajan,general manager for extending their co-operation and guiding me to complete this project.

I also express my sincere thanks and appreciation to my friends and family members who helped me in the completion of this project successfully

EXECUTIVE SUMMARY

This project titled production planning and stock maintenancewas done in GEM manufacturing concern during the period of july 06– august 06, the study was done with the objective of to overcome the problems faced in the materials department by proper planning and stock maintenance. A questionnaire was prepared and data were collected from observation Questionnaire method, Direct interview, Discussion with officers

After collection of data percentage analysis weredone. From this the findings were got and suggestions were given according to finding to the management for implementation in the future.

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INTRODUCTION TO THE STUDY

CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

Production manager must plan, organize and control a variety of operations. Some of them are repetitive activities, and others are one-shot deals. Routine activities might be continuous or intermittent. The continuous production manager functions can be managed by assembly line balancing,scheduling, loading and control techniques. The type of technique required to manage these activities depends on the complexity of the project. For small projects, gantt charts are adequate, whereas for large and complex projects, critical path method or the program evaluation and review technique would be more effective.

According to Koontz and O'Donnel, "planning is deciding in advance what to do, how to do it, when to do it, and who is to do it. Planning bridges the gap from where we are to where we want to go It makes it possible for things to occur which would not otherwise happen".

The planning is considered to be an essential step in any business because the end results depend on the input and the approach followed at this stage. So the productivity of an organization can be improved by better planning efforts.

The planning process within an organizationis dynamic and continuous. It is nothing but deciding the future course of the organization well in advance so that executives at different level will play their role as per the guide lines.

In any organization , the following types of decisions are taken.

1. strategic decisions which are taken at top level management
2. tactical decisions which are taken at middle level management
3. operational decisions which are taken at bottom level management.

Similarly, control process within an organization plays a major role in organization productivity improvement. So, a careful control system with a proper feedback mechanism is a must to correct the whole business processat appropriate time to manufacture and deliver the goods as per the plan.

Production planning and control has three phases.

1. planning phase
2. action phase
3. control phase.

1.1.1 PLANNING PHASE

Production planning is an exercise of intelligent anticipation in order to establish how an objective can be achieved or a need fulfilled in circumstances which are invariably restrictive.

1.1.2 ACTION PHASE

Action phase provides guide lines for implementing all the plans into practice.

1.1.3 CONTROL PHASE

Production control phase provides necessary guide lines to control the production system through a feedback mechanism.

1.2 OBJECTIVES OF THE STUDY

The primary objective is to overcome the problems faced in thematerials department by properplanning and stock maintenance

The secondary objectives are

1. To ensure optimum utilization of available resourcesby reducing wastages,
2. To minimize the timeof recordings,
3. To reduce the work load of the employees by introducing computerized material management system, and
4. To suggest measures to the management based on the findings.

1.3 SCOPE OF THE STUDY

The main scope of the study is to identifyand rectify the problems in production departmentand stock maintenanceat GEM manufactures private limited.The duration of the study is six weeks from 01.07.2006 to 09.08.2006.

1.4 METHODOLOGY

1.4.1 TYPE OF THE STUDY

The research design used in the study is descriptive. Research design is the scheme of work to be undertaken by a researcher of various stages. It is a guide to the researcher to achieve the goal set. The research design includes mode of data to be collected, and analysis part of research. In order to study this particular topic "employee turnover" the researcher adopted "descriptive design". Descriptive research study is concerned with describing the characteristics of nature of group.

Hence the aim of the present studyis to identify the problems inproduction department and stock maintenance at GEM manufactures private limited.

1.4.2 DATA COLLECTION:

The primary data are collected through

1. observation
2. Questionnaire method
3. Direct interview
4. Discussion with officers

The secondary data are collected through

1. Various manuals
2. Various records from the departments
3. Journals and books
4. Websites and e-mail

1.4.3 TOOLS OF ANALYSIS

The data collected were put up in excel sheet , by using this sheet simple tables were drawn. Then they are analyzed using statistical techniques like percentage, standard deviation etc...

1.5 LIMITATIONS

One of the main demerit of this study is computerized material management and stock maintenance system involves high investment cost and heavy maintenance cost and the analysis of the data is undertaken with the help of data collected with the limited employees.

1.6 CHAPTER SCHEME

1. **Introduction to the study.**
2. **Organization profile.**
3. **Macro micro economic analysis.**
4. **Data analysis and interpretation.**
5. **Conclusion.**

Chapter 1:

Introduction to the study, the first chapter of the project comprises of five divisions, objectives of the study tells about the aim for which the study is carried out, scope tells about the area for which the study can be applied, research methodology tells the type of research model used, limitations explain the constraints encountered during the study and the chapter scheme briefs out every chapter of the study.

Chapter 2:

organization profile, this chapter comprises of history of the organization, organization chart which explains the hierarchy of the company, various departments of the concern are described elaborately in the departments title.

Chapter 3:

Macro and micro analysis ,this chapter has two parts, the analysis of the Indian electronic industry as a whole looking in to various important export details, contribution in world economy are discussed and the role ofGEM manufacturers in the economy is discussed.

Chapter 4:

Data analysis and interpretation chapter comprises of tables and charts it gives the tabular distribution of the collected data , analyzed percentage values, graphical representation of found result.

Chapter 5:

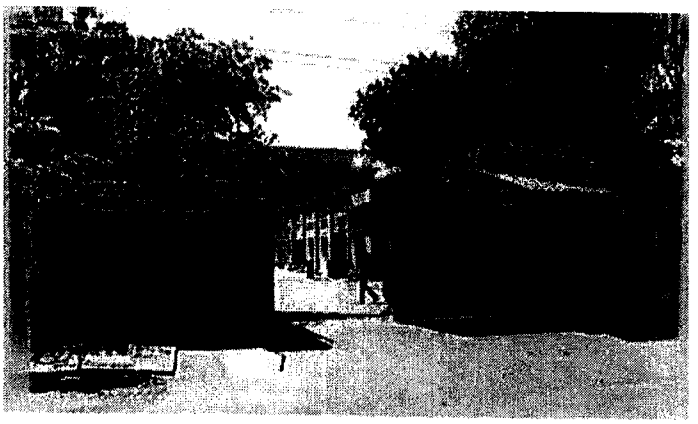
The final chapter part is conclusion this details the findings of the study and gives suggestion that the researcher put forward to the management as a result of the study.

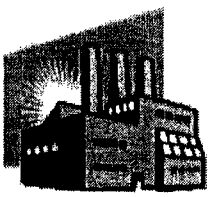
CHAPTER 2

ORGANIZATION PROFILE

CHAPTER 2

PROFILE OF THE ORGANISATION





COMPANY PROFILE

Gem is a widely recognized and established name in the Lamp industry worldwide for the supply of switches, Lead-in-Wires, Lead-in-Wire raw materials and Lead-in-Wire technology. Started by a young and ambitious engineer with a vision to contribute to the industrial and economic map of India, Gem Electro Mechanicals in today's resurgent India dates back to its foundations 2½ decades back. Foresight, diligence, self innovations and focus on Customer Needs have helped us to flourish into a deep rooted industry.

"OUR VISION OF BUSINESS IS AN ENDLESS STRIVE FOR EXCELLENCE TO BE THE BEST IN CLASS."

Gem Electro Mechanicals (GEM) provides complete solutions for Lead-in-wire manufacturing for the electric lamp industry.GEM is the only company in world which not only manufacturers lead in wires but also all the raw materials and technology for the

manufacture of Lead-in-wires. These raw materials- such as Nickel wire, Nickel-Copper alloy wires, Nickel-plated wires (Steel, Copper, Copper-Tin) and Dumet wire are also available for sale to other companies manufacturing Lead-in-wires. GEM also manufactures Lead-in-wire machines and provides complete consultancy, technology and training for companies planning to start their own Lead-in-wire manufacturing.

OUR CAPABILITIES

Over the years, GEM has built up a commendable infrastructure and an investment in know-how, equipment and skilled manpower. We believe that our biggest asset is our skilled and highly trained work force, dedicated to tread the path to reach the summit of 'BEST IN CLASS'. With the diversified manufacturing activities in various divisions and a dealer network throughout the world, GEM possesses the infrastructure to cater to the Needs of the Customers even in the remotest corners of the world.

Gem has a large number of switches and Lead-in-Wire making machines from Japan, France, USA, UK, Taiwan, Poland, Hungary as well as *our own in-house designed machines.*

These machines produce millions of switches and wires of different types, for incandescent domestic lamps, fluorescent tube lamps, compact fluorescent lamps, automobile lamps, miniature lamps, high wattage lamps, high-intensity-discharge lamps, neon sign lamps, glow testers, starter lamp etc . . . .

Our manufacturing capacities are continuously increasing to meet the demands of our present and new customers.

QUALITY ASSURANCE

For ensuring the highest quality, GEM has installed sophisticated Test Systems backed by an excellent Inspection Procedure from raw material to finished products.New materials and technologies are being continuously developed at Gem so that our customers can make world class products and

compete globally. Gem has fully equipped inhouse laboratories for testing and development of new materials and a very strong team of dedicated engineers to accomplish this goal.

"The Sole purpose of our Business is to satisfy the needs of our customers and to DELIGHT him beyond his expectations by supplying world class quality products consistently."

Our vision of business is an ENDLESS STRIVE FOR EXCELLENCE to be the BEST IN CLASS.

2.1 HISTORY OF THE COMPANY

GEM manufacturing concern started production fifty seven years ago in the industrially awakened city of south India, coimbatore. Initially agricultural implements such as power fillers, boring machines, motor pumps sets were produced to help cater to the needs of independent India whose economy was mainly dependent on agriculture. Then finding a good scope for electrical switch gears and motors control gears it switched over to this line of manufacture in the 1960'ssince then, there was no looking back with its range of products multiplying as air break switches and motor starters. The company's name not only earned a good name for themselves but also boosted the goodwill and reputation among industrial and agricultural users of the company.

The period between 1966-1981 can be called "the golden age of GEM" as it had made an impressive performance in exports. Goods were exported to the middle East and Arab countries "GEM" won the highest award for outstanding performance in the export of electrical control and switch gears in the year1973-1974 awarded by the engineering export promotion council of the government of India.Gem has built up a sterling reputation overa period of five decades

The company has three units under its control and all are situated in the industrial suburb of coimbatore,Ganapathy.

The units are

1. MAIN UNIT – Ganapathy Engineering Manufacturers private limited, Ganapathy.

2. SUBSIDIARY UNIT - Ganapathy Electrical controls private limited.

3. SISTER CONCERN - Messers libra electrical meters private limited .

2.2 MANAGEMENT

The management follows custodial model in the organization. so the employees feel very secure and they psychologically depend on the organization.There will be passive co-operation among the employees and their needs are met at the appropriate time.

The Managing Directors are

Smt. Rajini R. and

continued by P N S Sundaram and

continued by **V S Thiyagarajan.**

2.4 PRODUCT PROFILE AND MARKET POTENTIAL

GEM products have countrywide acceptance and are a trusted name with domestic and agricultural consumers, industry and government department. GEM group of companies is committed to deliver quality products and adopts ethical business practices.

GEM group is involved in manufacturing the following LV Switchgears products

1. Airbrake Switch fuses and fuse Switches,
2. Motor Starters,
3. Isolators,
4. Distribution Boards,
5. changeover Switches for domestic and industrial use,
6. Residual current circuit breakers,
7. High rupture fuse links.
8. Electronic motor protection devices.
9. pump control panels.
10. Gears & Motor Control Gears.

2.5 COMPETIVE STRENGTH OF THE COMPANY

In spite of heavy competition from the English electronic company of India, ltd., Larsen and Toubro Ltd., crompton greaves of India Ltd and other established companies,GEM has done very well in sales which will be evident from their present sales figures and their turn over of the previous years.The future of GEM is very bright, as GEM is the one of the leading company in making a wide variety of products catering to the needs of many types of industries under one roof.

The brand image is also another important strength of the company. The warranty period given by GEM is comparatively high to other companies. The dealers have highly automated and sophisticatedworkshop. It is equipped with all infra structure to service thevehicle with more satisfaction.

2.5.1 Our Assurance

We are a quality driven company that ensures that quality is cautiously nurtured at every stage of the manufacturing process. All the raw materials are inspected and regular checks are undertaken on the products. Our team of experts maintains a strict vigil on the manufacturingprocess to ensure that all the products are without any defects.

2.5.2 Our Facilities

We possess state-of-the-art-technology and hi-tech machines, which yields excellent results and ensures efficacy and quality of products. All the manufacturing and processing is done under guidance of our Engineers and motivated workforce towards achieving zero defect products.

2.5.3 Customer Satisfaction

Our quality products have resulted in the satisfaction among our clients all across the globe. The response and support of our clients have encouraged us to improve our performance.

2.5.4 Retention & Expansion

1. Visit major employers (100 employees +) every 18 months,
2. Continue to promote diversification of industry through high tech attraction efforts,
3. Enhance/maintain strategic alliances with the various chambers of commerce, Visitor and Convention Bureau, Erie Regional Planning, Small Business Development Center, and provide support services to these entities,
4. Enhance relationship with health care facilities,
5. Continue strong partnerships with financial institutions.

2.6 DEPARTMENTS IN GEM MANUFACTURING CONCERN

2.6.1 PRODUCTION DEPARTMENT

PLANS ARE NOTHING– PLANNING IS EVERYTHING

PRODUCTION PLANNING

To ensure that the resources to accomplish he mission of an organization are available, operations must be planed before they can be undertaken. Without advance planning, a firm may not be able to produce for an increase in demand at some future date. The capacity may not be available at that future date, and sales may be lost. With advance planning, future demand could be produced earlier to meet later demand. Customers provide inputs through booked orders and anticipated orders through forecasting. The planning process then determine the productin plan to meet these demands and provide out put that can be used by the suppliers to provide the needed inputs at the right time and place.

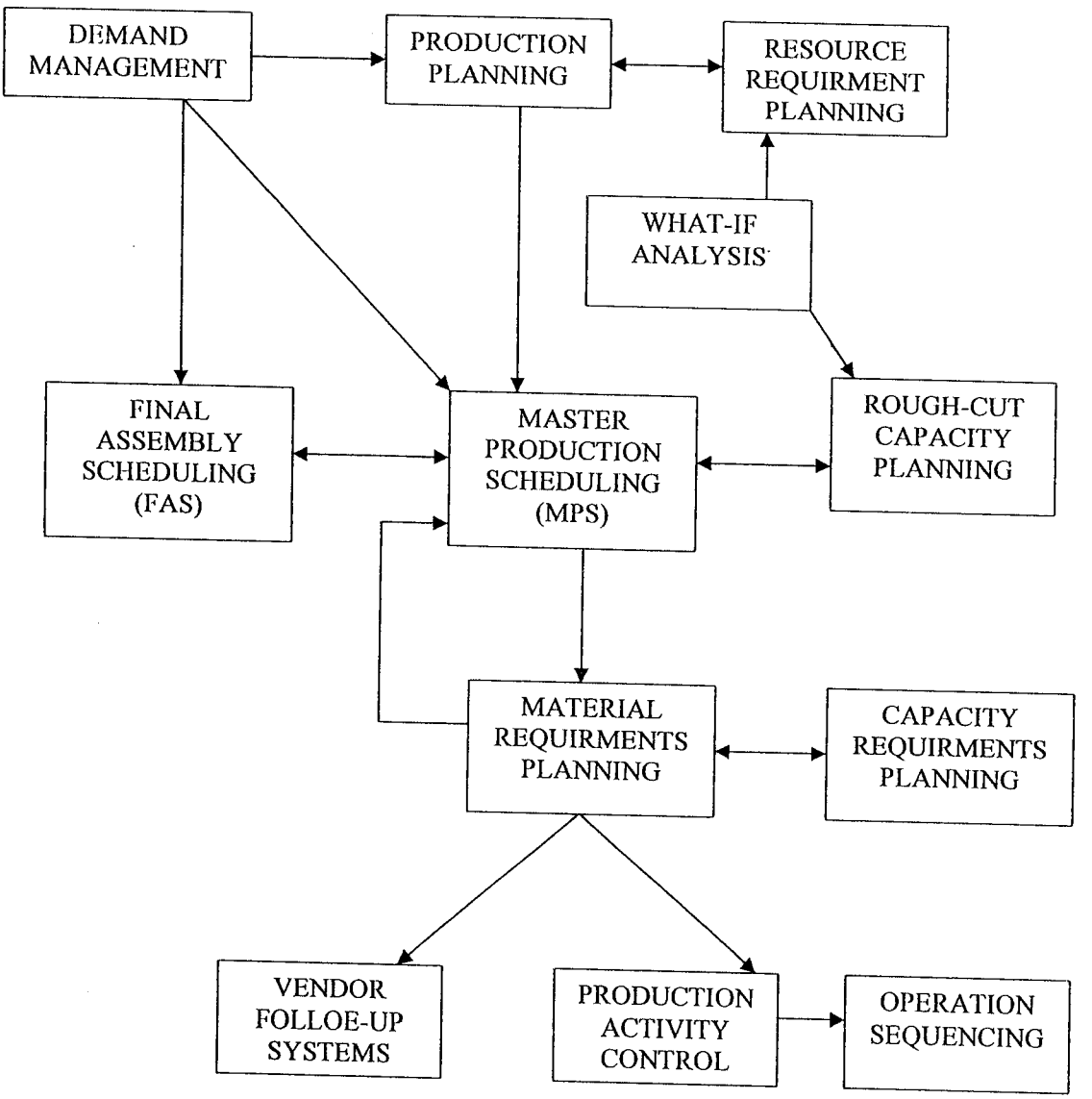
The three basic planning processes are

1. Aggregate planning,
2. Master production scheduling and
3. Materials requirements planning.

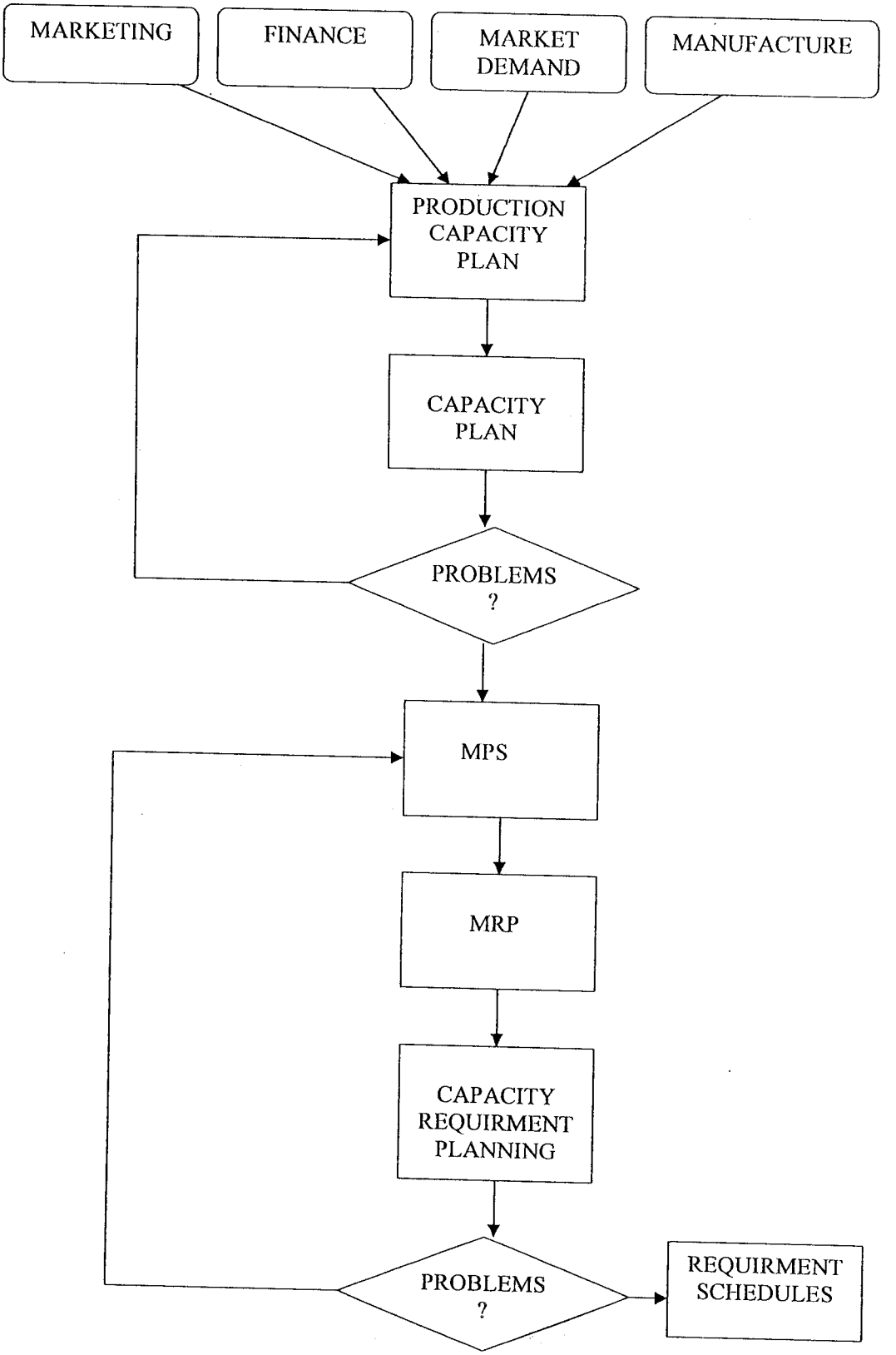
The normal process within planning organizations is to develop aggregate plans at the plant level to balance demand with capacity and inventory levels for the entire operation. As customer provide the inputs to the process by providig orders. These plans can then be disaggregated to specific items. The master production schedule will take the forecast demands and determine a manufacturing plan, which is used as input to the materials requirements planning systems. The result is a manfacturing plan that should satisfy the demands and meet capacity requirements.

After planning the activities, the production process is continued as per the planning schedule.

RELATIONSHIP OF MPS TO OTHER MANUFACTURING PLANNING AND CONTROL ACTIVITIES



OVERVIEW OF MRP



2.6.2 QUALITY ASSURANCE DEPARTMENT

QUALITY POLICY

"The company endeavors to ensure at every level of production and distribution, the highest standards of quality and customers satisfaction to ensure that all processes, methods and products are relevant to market demands and technological advancement."

2.6.3 TIME OFFICE

The workers wages and attendance are monitored by the tim office department. There are 5 staffs in this department and they keep track of workers attendance with the help of attendance punching cards. These cards have holes which correspondto a particular number and each employee has a particular number. These cards are inserted in an electronic device and data is updated in computer.

Employees attendance are recorded in yellow card which signifies that he/she is given leave with pay, this is the case only if the employee has attended 240 days last year. Pink card signifies no leave with pay. Double wages is given to those employees who work on national holiday.

2.6.4 HUMAN RESOURCE DEVELOPMENT

HR department has come up with lots of innovative practices which help the employees in various ways. This department recruits employees by conducting personnel interviews. They also conduct classes for the employees which is a means of training for them. In co-operative credit society the employees have established thrift society, by extending their savings by way of thrift every month and extending various loans and services to their members. They offer personal loan i.e. maximum of one lakh at 9% interest rate, educational loan, funeral expenses of Rs.5000 in case of any death in the members family, mediclaim policy and insured sum of Rs.3,00,000/ in case of personal accident. They also have educational award and attendance award. Personal counselling, grievance handling and mentoring is done. Attendance bonus is paid to employees who attend all days in a month. Superannuation fund is contributed to executives. Personality development will be conducted by the outside agency, frequently to the women employees. These are the various innovative practises of human resource development department.

COMPUTERISED MATERIAL MANAGEMENT AND STOCK MAINTENANCE

OBJECTIVE

The main objective of computerized material management and stock maintenance is to reduce the work load of the employees and to reduce the time and cost. This ensures flexibility, simplicity, versatility and accuracy.

INPUTS USED

SYSTEM CONFIGURATION

HARDWARE REQUIREMENTS

Processors	: Pentium 111@ 1.13 Ghz
Hard Disk	: 20 GB
Mouse	: Samsung mouse
Operating system	: windows 98

SOFTWARE REQUIREMENTS

Operating system	: windows 98
Front End	: visual Basic 6.0
Back End	: Oracle 8.0

SOFTWARE DESCRIPTION

.VISUAL BASIC

The "visual" part refers to the method used to create the graphical user interface (GUI).rather than writing numerous lines of code to describe the appearance and location of interface elements; we simply drag and drop pre-built objects into place on screen. If you have ever used a drawing program such as paint,you already have most of the skills necessary to create an effective user interface.

The "Basic" part refers to the BASIC language, a language used by more programmers than any other language in the history of computing.Visual basic has evolved from the original BASIC language and how contains several hundred statements, functions, and keywords, many of which relate directly to the windows GUI. The Visual Basic programming system, application edition included in Microsoft Excel, Microsoft Access and many other windows application uses the dame language.

Whether your goal is to create a small utility for yourself or your own group, a large enterprise-wide system, or even distributed applications spanning the global via the internet, Visual Basic has the tools you need. Data access features allow you to create databases and front-end application for most popular database formats, including Microsoft SQL server and other enterprises level databases.

Active X technologies allow you to use the functionality provided by other application, such as Microsoft Word, Microsoft excel and other windows application and objects created using the professional or enterprise editions of visual basic.

Internet capabilities make it easy to provide acces to documents and applications across the internet from within your application.your finished application is a true exe file that uses a run-time dynamic link library (DLL) that you can freely distribute.

RDBMS

INTRODUCTION

Database management systems have evolved fromhierarchical to network to relational models. Today,the most widely accepted database model is the relational mode.The relational model has three major aspects.

STRUCTURE

Structures are well-defined object that store the data of a database.Structures and the data contained within them can be manipulated by operations.

OPERATIONS

Operations are clearly defined actions that allow users to manipulate the data and structures of a database.The operations on a database must adhere to a predefined set of integrity rules.

INTEGRITY RULES

Integrity rules are the laws that govern which operations are allowed on the data and structures of a database.Integrity rules protect the data and lte structures of a database.

PRIMARY KEY

A field or a combination of fields that provide unique identification of a record for manipulation of table is called as primary key.

FOREIGN KEY

A field or combination of fields in a table that are part of primary key of sum other table is called as "foreign key".

CANDITATE KEY

A relation in which there is more than one attributes combination possessing unique identification property and hence morethan on "candidate key".

ADVANTAGES OF RELATIONAL DATABASE MANAGEMENT SYSTEM

1. Independence of physical data storage and logical database structure.
2. variable and easy access to all data.
3. complete flexibility in database design.
4. reduced data storage and redundancy.

CONTROL AVAILABILITY OF ORACLE

ORACLE can selectively control the availability of data,at the database level and sub-database level for example,and administrator can disallow use of a specific application so that the application's data can be reloaded , without affecting other applications.

MANAGABLE SECURITY

To protect against unauthorized database access and use, ORACLE provides fail-safe security features to limit and minordata access. These features make it easy to manage even the most complex design for data access.

ORACLE SQL *PLUS

SQL stands for structured query language,which is used to communicate with the relational database,which are in turn a set of related information stored in the form of tables.

SQL is a non-procedural language because it processes sets of records rather than just one data at a time and also provides automatic navigation to the data. Here one can manipulate set of rows rather than one at a time. SQL commands accept sets or rows as input and returns set as output. The set property of SQL allows the results of the one SQL statement to be used as input to another SQL provide commands for a variety of tasks including.

1. Querying data
2. Inserting, updating and deleting rows in an object
3. Creating, replacing, altering and dropping objects
4. Controlling access to the database and its objects
5. Guaranteeing database consistency and integrity

The SQL language is sub divided according to their functions as follows;

1. Data definition language (DDL) – create, alter, and drop table.
2. Data manipulation language (DML)– select, insert, update and delete record
3. Transaction control language (TCL)– commit, save point and rollback
4. Data control language (DCL)- Grant and Revoke.

CHAPTER 3

MACRO MICRO ANALYSIS

CHAPTER 3

MACRO- MICRO ECONOMIC ANALYSIS

3.1 ANALYSIS OF INDIAN ELECTRONIC INDUSTRY

The Indian electronic components industry is set to hit the roof. With more overseas electronic giants and markets keen on outsourcing components from India, the industry of late has seen many outsourcing deals. For companies, outsourcing electronic components from India may not have a cost advantage compared to a more competitive market like China. But MNCs conform to the quality customization of the components, which has given the Indian market its edge.

Global electronic companies have entered into huge outsourcing deals with suppliers based in Bangalore, Hyderabad and the NCR (Nation Capital Region). For companies like GEM and Electrolux, outsourcing components is now an annual feature as against the one-time contract.

The quality and performance standards of Indian vendors and are confident that our outsourcing from Indian supplier will increase the customers. Similarly, GEM Electronics, the leading player among consumer durable brands is also on an outsourcing drive from Indian suppliers for its Indian and US manufacturing plants.

In 2003, 38 per cent of the components manufactured in the country were exported and out of the total electronic hardware exports, components contribute a significant 42 per cent. These figures will certainly shoot up in 2004, says a research executive with Electronic Component Manufactures Association.

Riding on a booming economy even in a world of downturns and war clouds, the Chinese electronic industry is eyeing India as its next destination to outsource components and finished goods for expanding its global market share. With political, economic and cultural relations between India and China on rebound, the Chinese manufacturing sector is keen on investing in India to set up either subsidiaries or joint ventures in the hardware sector, which in turn, could bail out the fledgling Indian electronic sector in the current decade.

Though India is moving in the right direction so far as its import tariff and other taxation measures are concerned, a lot more needs to be done on labour reforms, single-window clearance and efficient transport sector, beit roads, sea ports, or airports for faster shipments and travel. Since India has agreed to reduce import tariffs on all IT and electronic products to zero duty by 2005, and bring about preactive reforms in the industry on taxation and regulation fronts,we can certainly make an entry into India for setting up our own production units here or supply raw material to outsource our global requirements in components, embedded software, and electronic production services through contract manufacturing.

According to Chinese Electronics & Information Industry Chamber of Commerce project manager, India should have more Special Economic Zones and high technology zones so that Chinese enterprises and other overseas investors could set shop here as was being done inChina over the years.

India needs to have radical policies at the central, state and provincial levels, with flexible labour laws, exit policy and freedom to do business by anyone under local conditions as there is no dearth of skilled workforce and dter resources.

3.2 GEM MANUFACTURES IN THE INDIAN ECONOMY

GEM manufacturing concern started production sixty years ago in the industrially awakened city of south India. GEM won the highest award for outstanding performance in the export of electrical control and switch gears awarded by the engineering export promotion council of the government of India.

GEM manufactures in today's resurgent India dates back to its foundations 2½ decades back. Foresight, diligence, selfinnovations and focus on Customer Needs have helped it to flourish into a deeprooted industry.

Over the years, GEM has built up a commendable infrastructure and an investment in know-how, equipment and skilled manpower. We believe that our biggest asset is our skilled and highlytrained work force, dedicated to tread the path to reach the summit of 'BEST IN CLASS'. With the diversified manufacturing activities in various divisions and a dealer network throughout the world, GEM possesses the infrastructure to cater to the Needs ofthe Customers even in the remotest corners of the world.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

TABLE 1

DISTRIBUTION OF RESPONDENTS ACCORDING TO THE GENDER

Gender	Frequency	Percentage
Male	85	56.67
Female	65	43.33
Total	**150**	**100**

INFERENCE:

It is clear from the table that 56.67 % are male and 43.33% are female in the study considered, the majority of the respondents aremale.

CHART-1

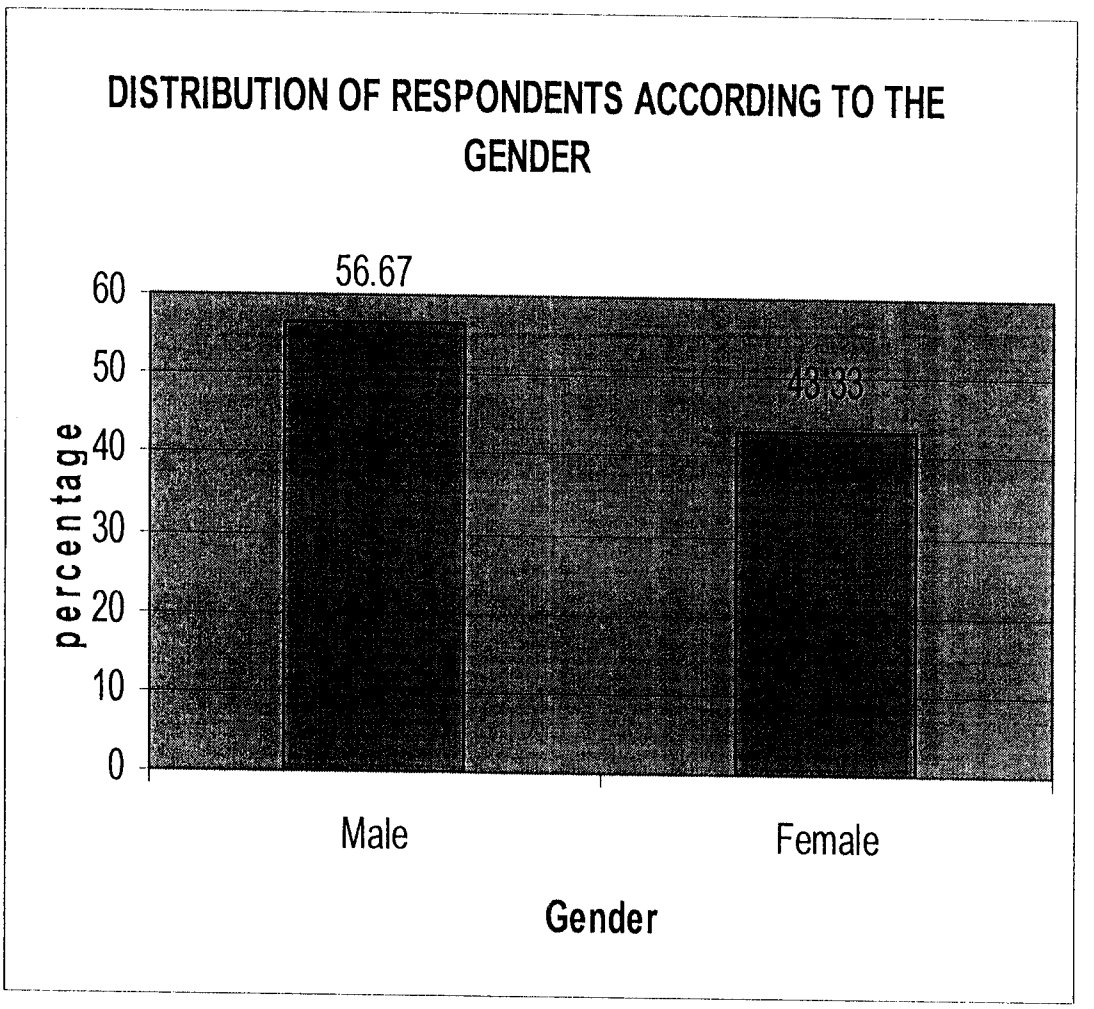

DISTRIBUTION OF RESPONDENTS ACCORDING TO THE GENDER
56.67
43.33
60
50
40
30
20
10
0
percentage
Male
Female
Gender

TABLE-2

DISTRIBUTION OF RESPONDENTS BY THEIR AGE

Age	Frequency	Percentage
18 – 24	62	41.33
25 – 40	81	54.00
41 - 60	7	4.67
Total	**150**	**100**

INFERENCE:

It is clear from the table that 54 percentage of the population are under the age group of 25-40 years, 41.33 percentage of the population are under the age group of 18-24 years, 4.67 percent is of the age group 41-60 years. Majority of the respondents are Under the age group 25-40 years.

CHART-2

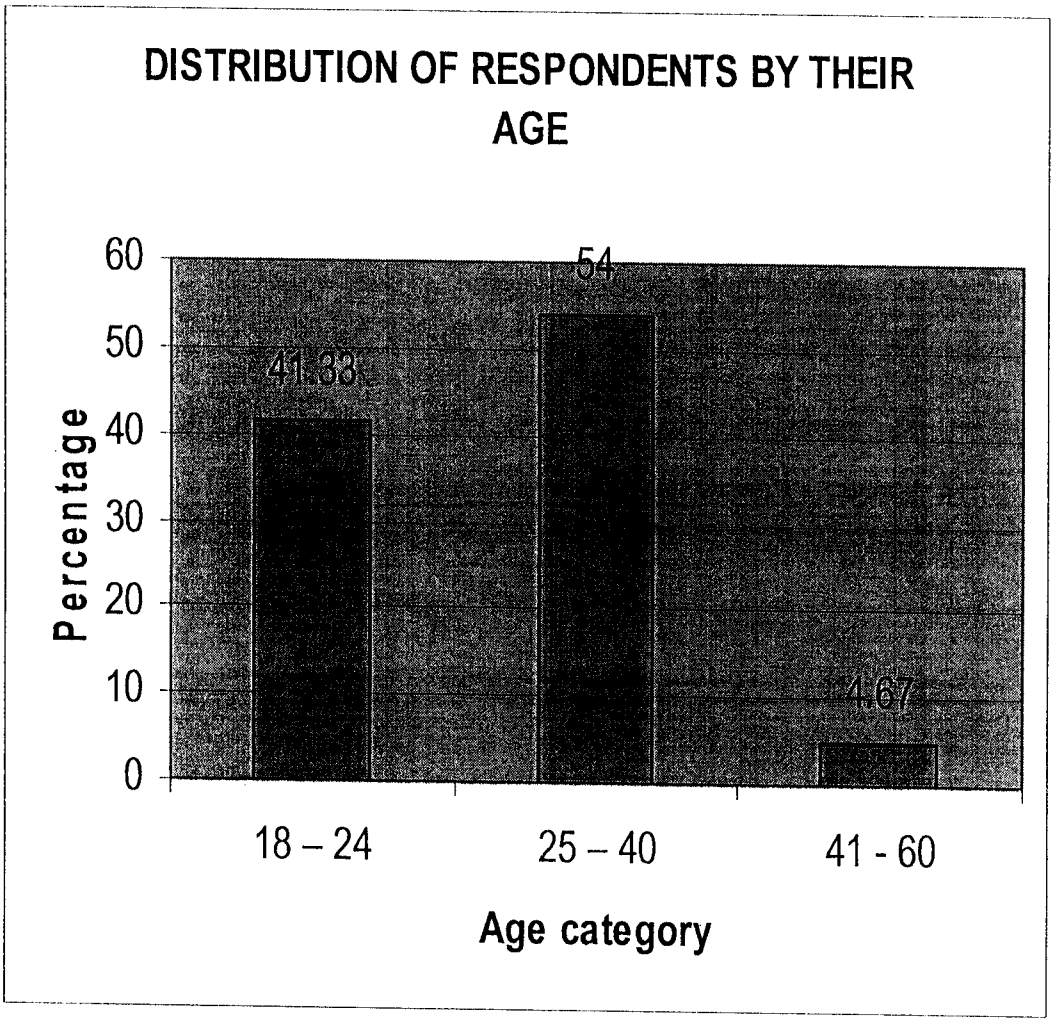

DISTRIBUTION OF RESPONDENTS BY THEIR AGE
60
50
40
30
20
10
0
Percentage
41.33
54
4.67
18 – 24
25 – 40
41 - 60
Age category

TABLE-3

PROBLEMS FACED WHILE PURCHASING RAW MATERIALS

Problems	Frequency	Percentage
Duplicate material	26	17.33
Poor quality	45	30
Short life	64	42.67
Low conductivity	15	10
Total	150	100

INFERENCE:

It is clear from the table that 17.33 percent of the respondents support duplicate material, 30 percent of the respondents support poor quality, 42.67 percent of the respondents support short life, 10 percent of the respondents support low conductivity.

Majority of the respondents says that, the problem faced while purchasing raw material is Short life.

CHART-3.1

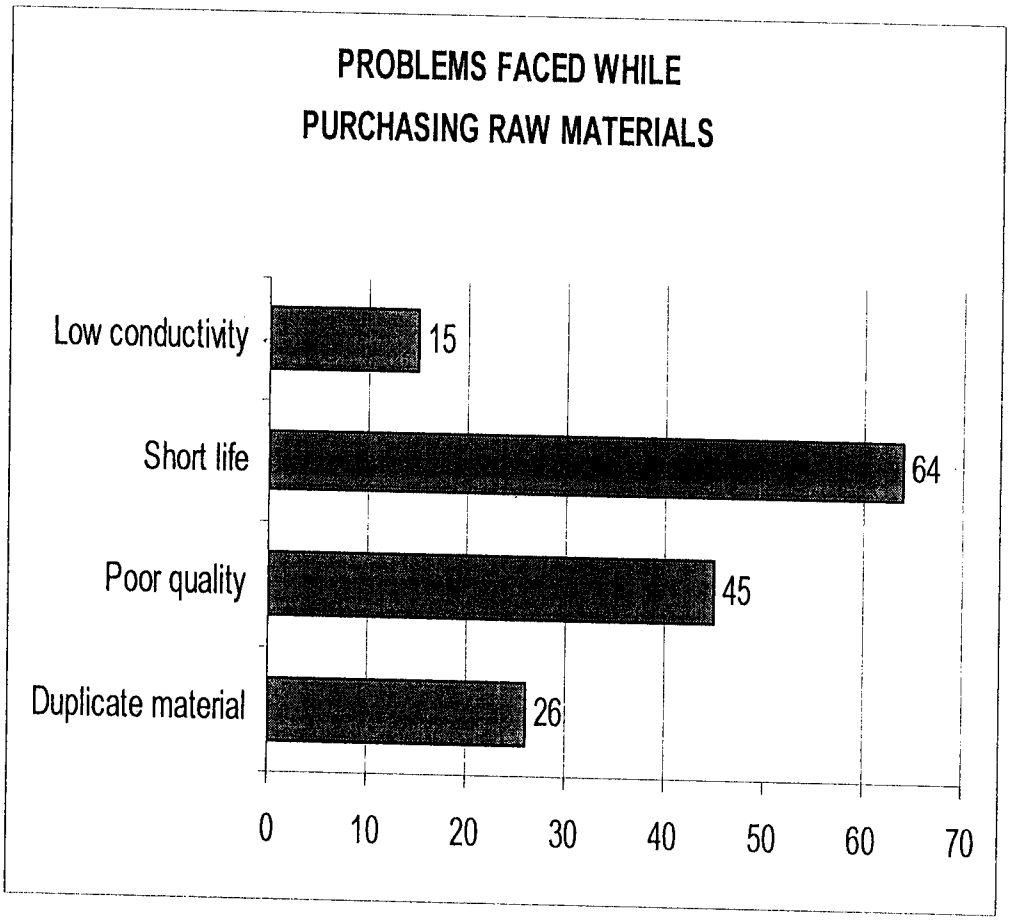

PROBLEMS FACED WHILE
PURCHASING RAW MATERIALS
Low conductivity
15
Short life
64
Poor quality
45
Duplicate material
26
0
10
20
30
40
50
60
70

CHART-3.2

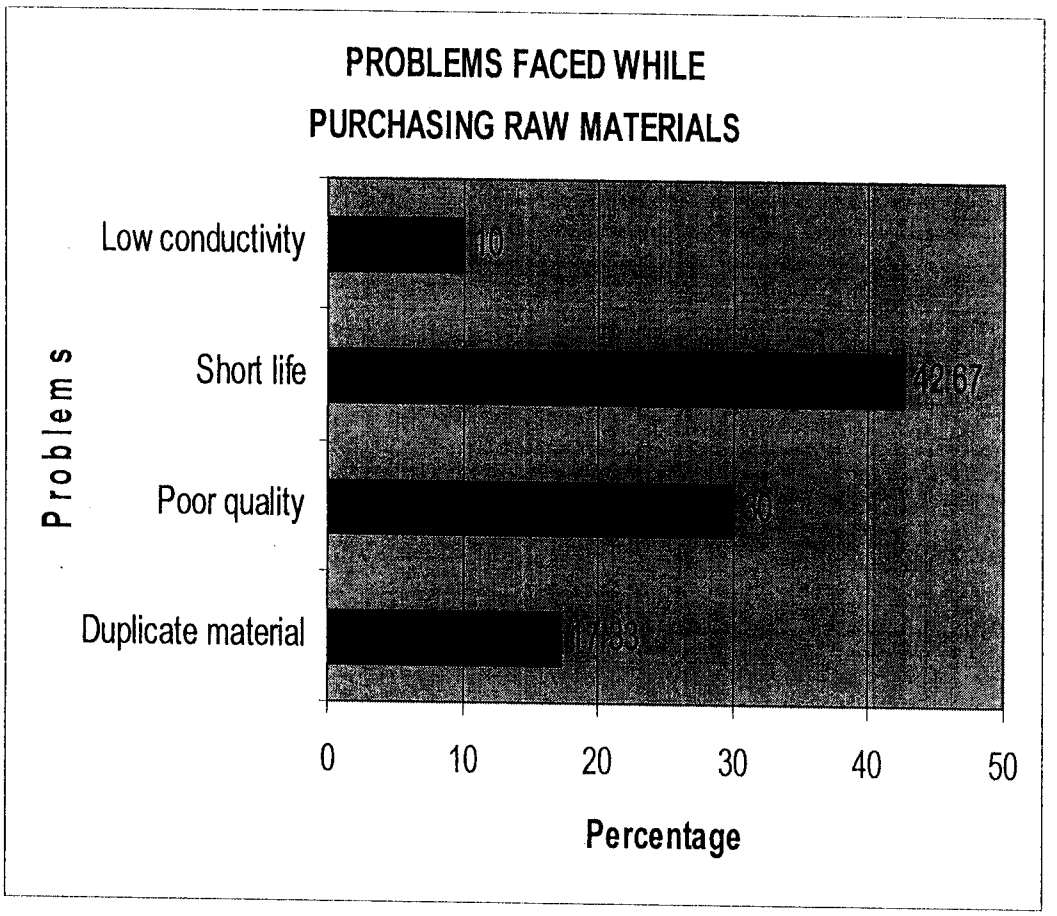

PROBLEMS FACED WHILE
PURCHASING RAW MATERIALS
Low conductivity
Short life
Poor quality
Duplicate material
Problems
10
42.67
30
17.33
0
10
20
30
40
50
Percentage

TABLE-4

WORK LOAD OF EMPLOYEES IN PRODUCTION DEPARTMENT

Work load	Frequency	Percentage
Very high	25	16.67
High	53	35.33
Low	61	40.67
Very low	11	7.33
Total	150	100

INFERENCE:

It is clear from the table that 16.67 percent of the respondents say that work load is very high, 35.33 percent of the respondents say that work load is high, 40.67 percent of the respondents say that work load is low, 7.33 percentof the respondents say that work load is very low.

Majority of the respondents say that, the work load in production department is low.

CHART-4

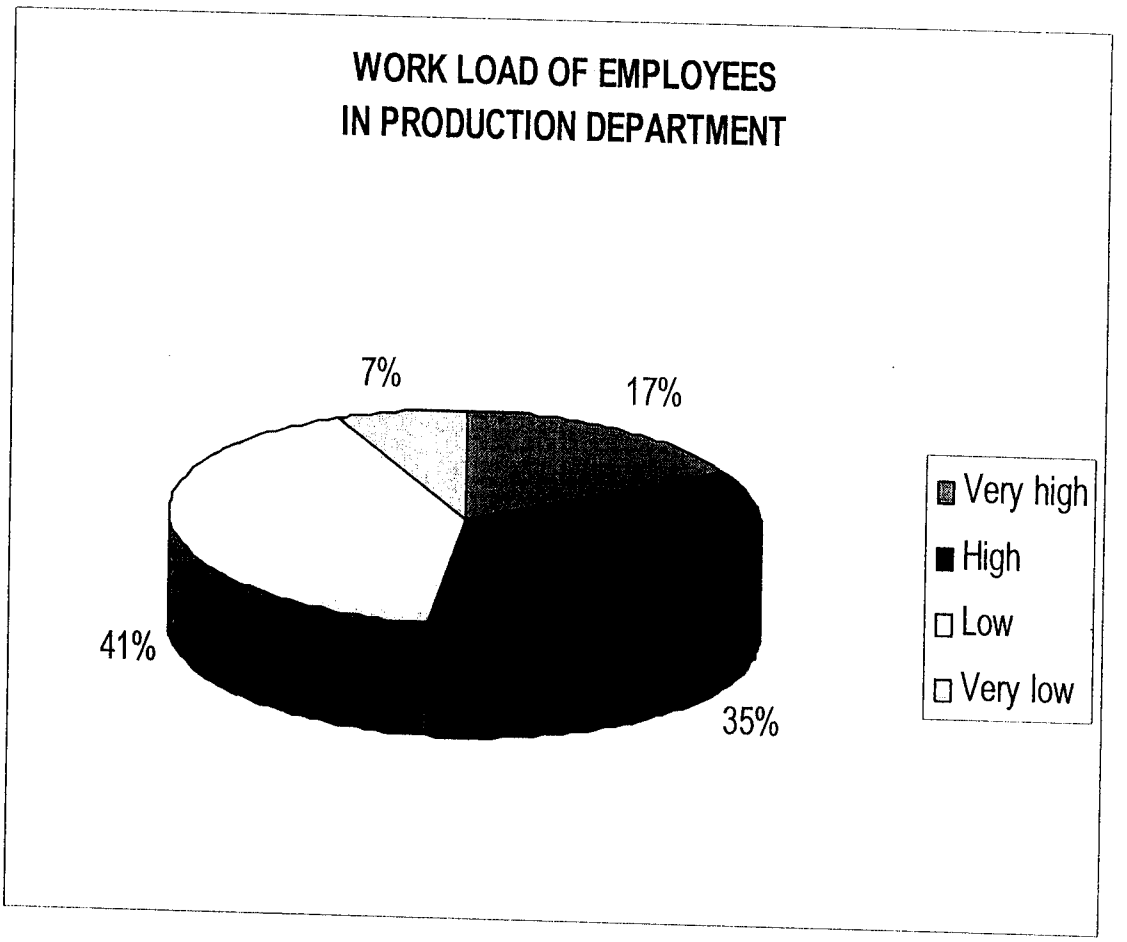

WORK LOAD OF EMPLOYEES
IN PRODUCTION DEPARTMENT
7%
17%
41%
35%
Very high
High
Low
Very low

TABLE-5

PROBLEMS FACED WHILE PURCHASING COPPER

INFERENCE:

Problems	Frequency	Percentage
Size of the product	18	12
Combination of material ratio	51	34
Bending strength	36	24
Poor quality	45	30
Total	150	100

It is clear from the table that 12 percent of the respondents support size of the product, 34 percent of the respondents support combi

nation of the material ratio, 24 percent of the respondents support bending strength, 30 percent of the respondents support poor quality.

Majority of the respondents say that, the problem faced while purchasing copper is Material ratio.

CHART-5

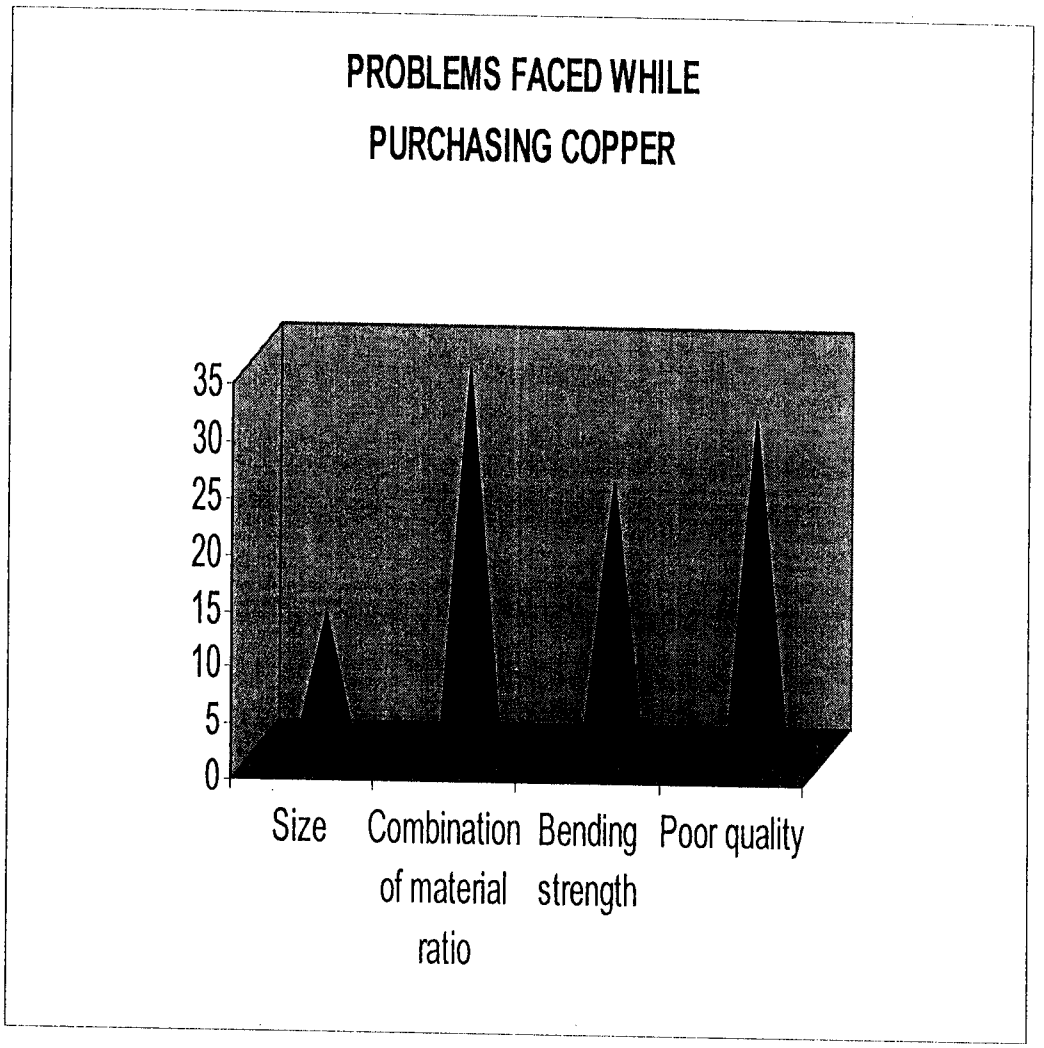

PROBLEMS FACED WHILE
PURCHASING COPPER
35
30
25
20
15
10
5
0
Size
Combination of material ratio
Bending strength
Poor quality

TABLE-6

SAFETY MEASURES IN PRODUCTION DEPARTMENT

Safety measures	Frequency	Percentage
Very good	35	23.33
Good	53	35.33
Bad	36	24
Very bad	26	17.34
Total	150	100

INFERENCE:

It is clear from the table that23.33 percent of the respondents say that safety measure is very good, 35.33 percent of the respondents say that safety measure is good, 24 percent of the respondents say that safety measure is bad, 17.34 percentof the respondents say that safety measure is very bad.

Majority of the respondents say that, the safety measure in production department is good.

CHART-6

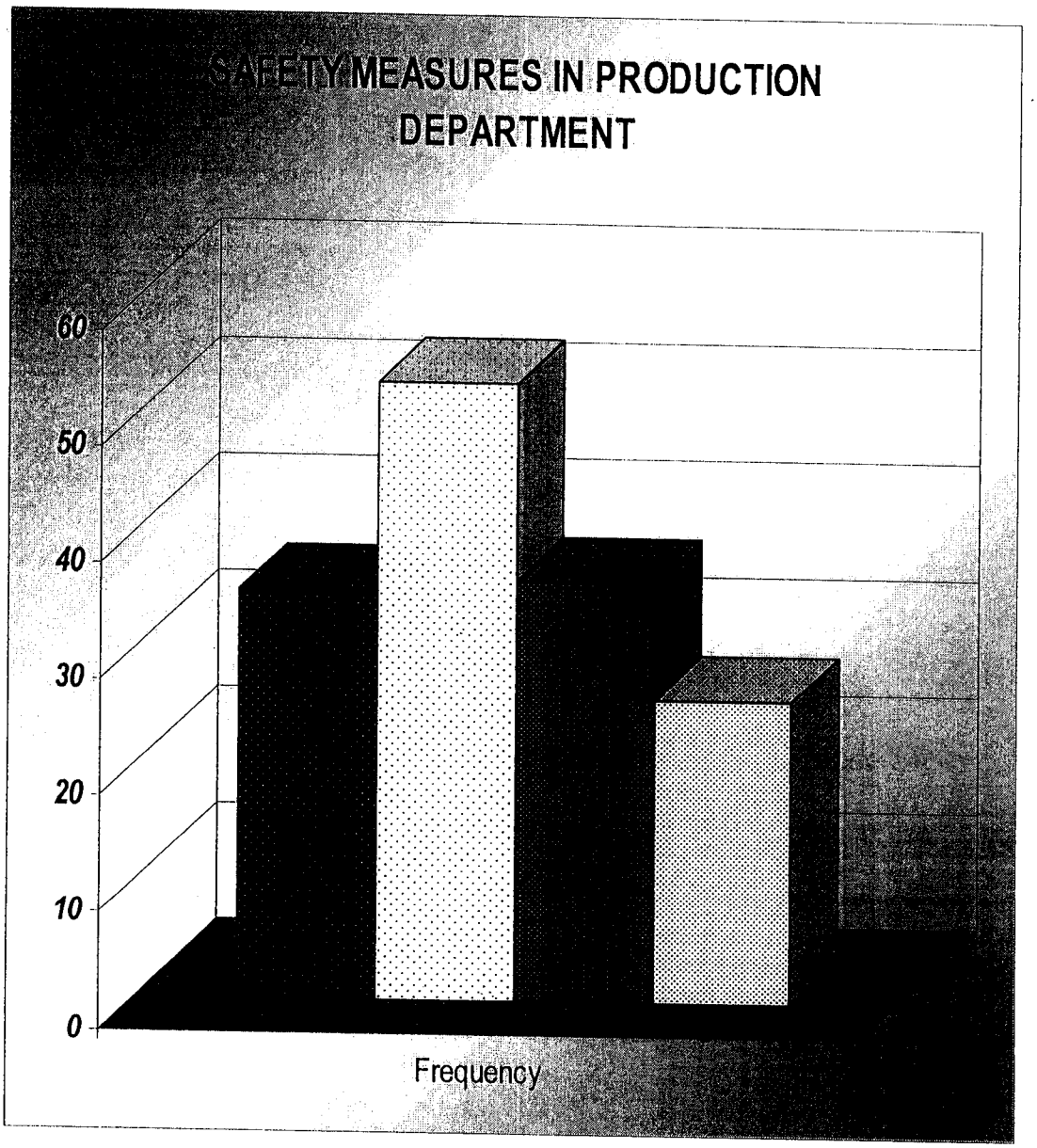

SAFETY MEASURES IN PRODUCTION DEPARTMENT
60
50
40
30
20
10
0
Frequency

TABLE-7

PROBLEMS FACED BY THE EMPLOYEES IN PRODUCTION DEPARTMENT

Problems	Frequency	Percentage
Less safety	23	15.33
Health problems	71	47.33
Work load	25	16.67
Less pay	31	20.67
Total	150	100

INFERENCE:

It is clear from the table that15.33 percent of the respondents support less safety, 47.33 percent of the respondents support health problems, 16.67 percent of the respondents support work load, 20.67 percent of the respondents support less pay. Majority of the respondents say that, the problem faced in production department is health problems.

CHART-7

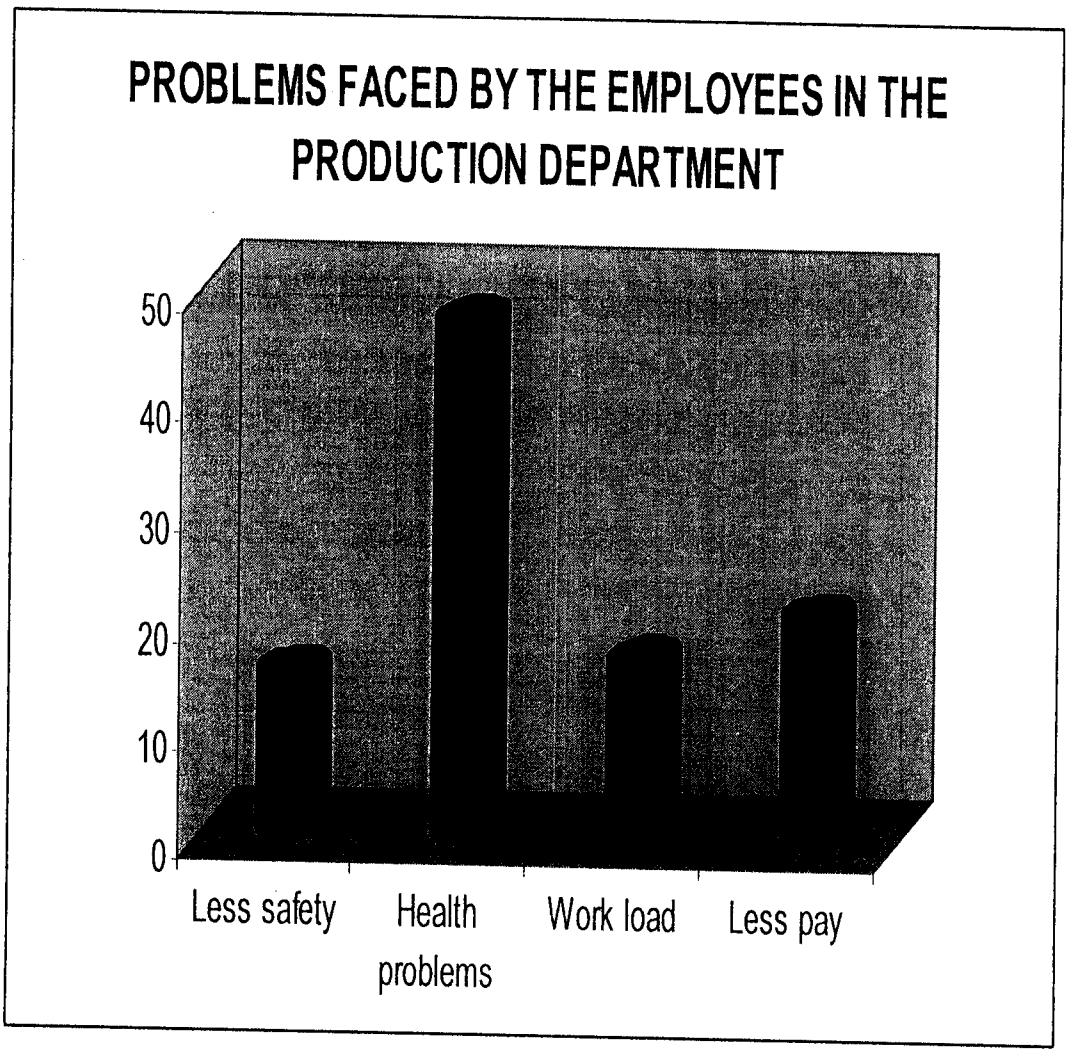

PROBLEMS FACED BY THE EMPLOYEES IN THE PRODUCTION DEPARTMENT
50
40
30
20
10
0
Less safety
Health problems
Work load
Less pay

TABLE-8

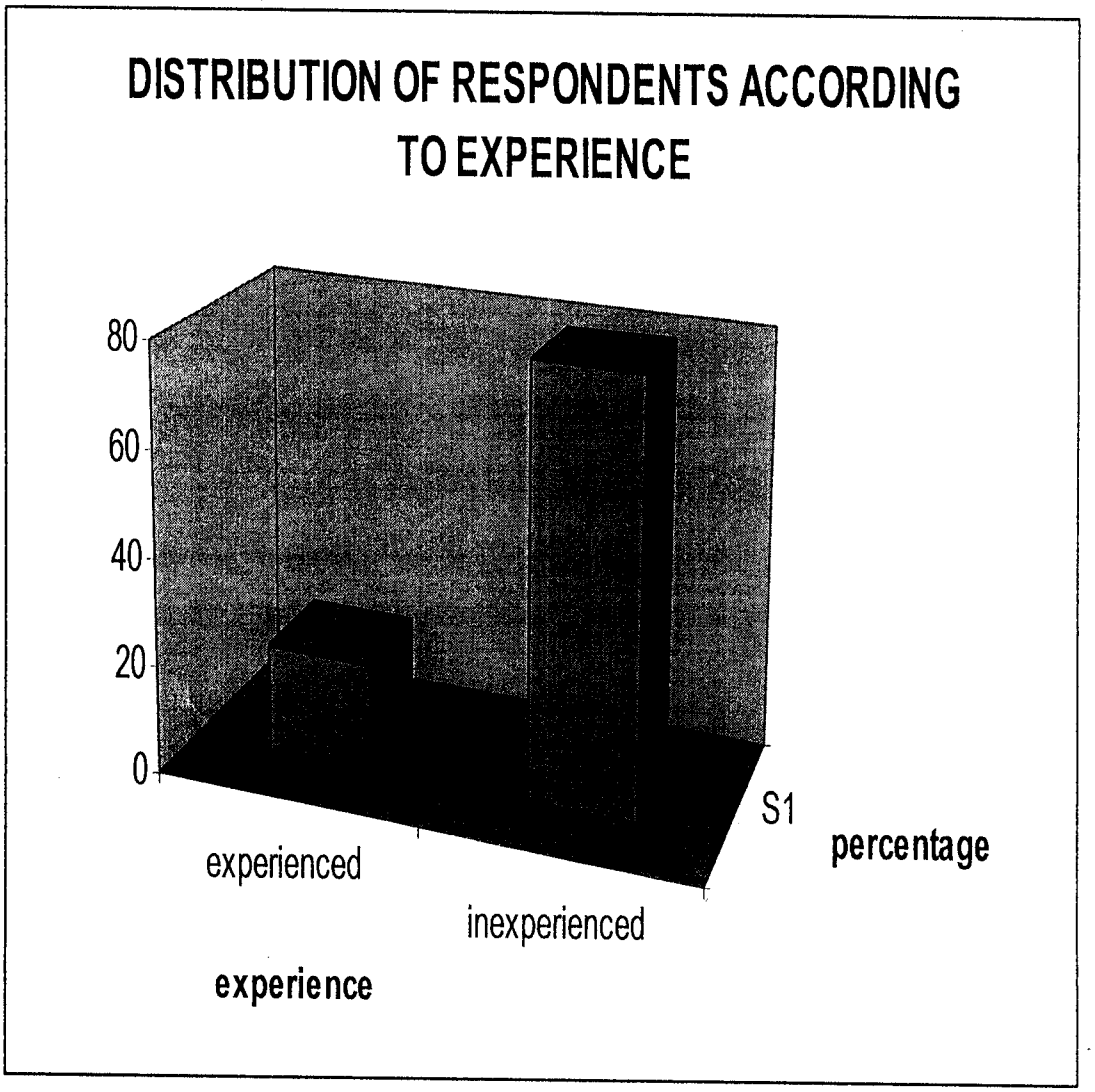
DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EXPERIENCE

Experience	Frequency	Percentage
Experienced	30	20
Inexperienced	120	80
Total	**150**	**100**

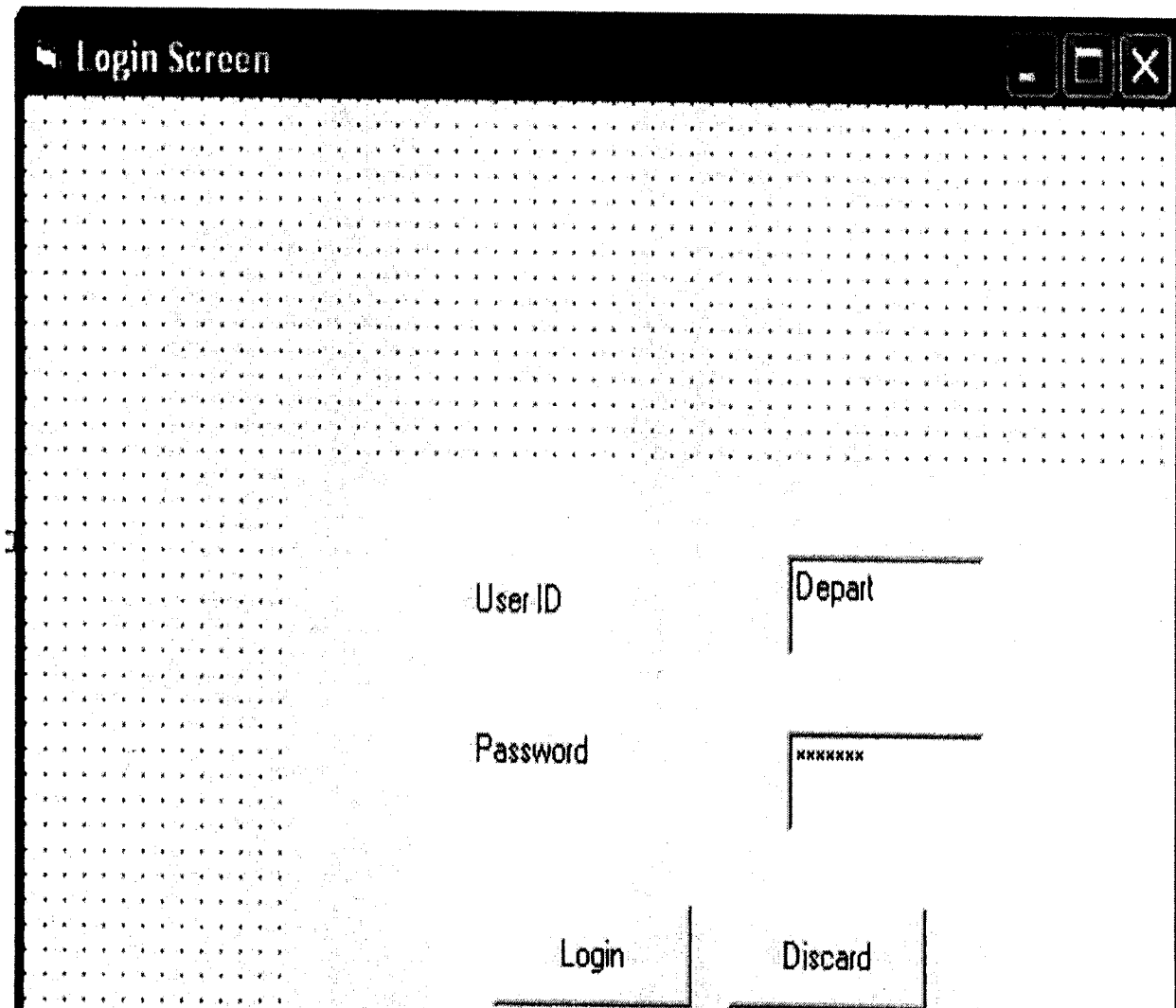
INFERENCE:

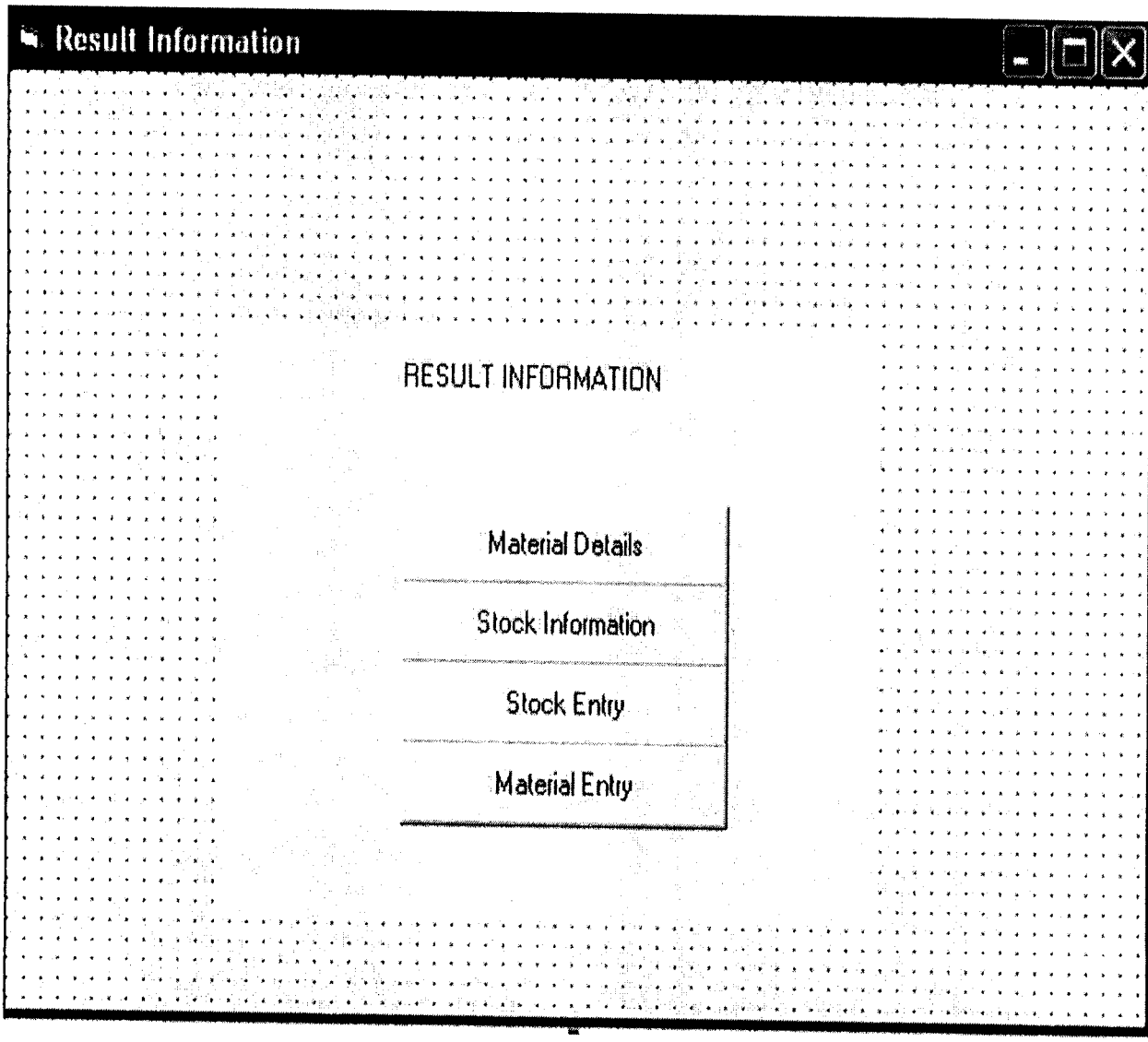
It is noted from above table that majority 80 percentage of the respondents are inexperienced and 20 percentage are experienced. It is found that most of the respondents don't have prior experience.

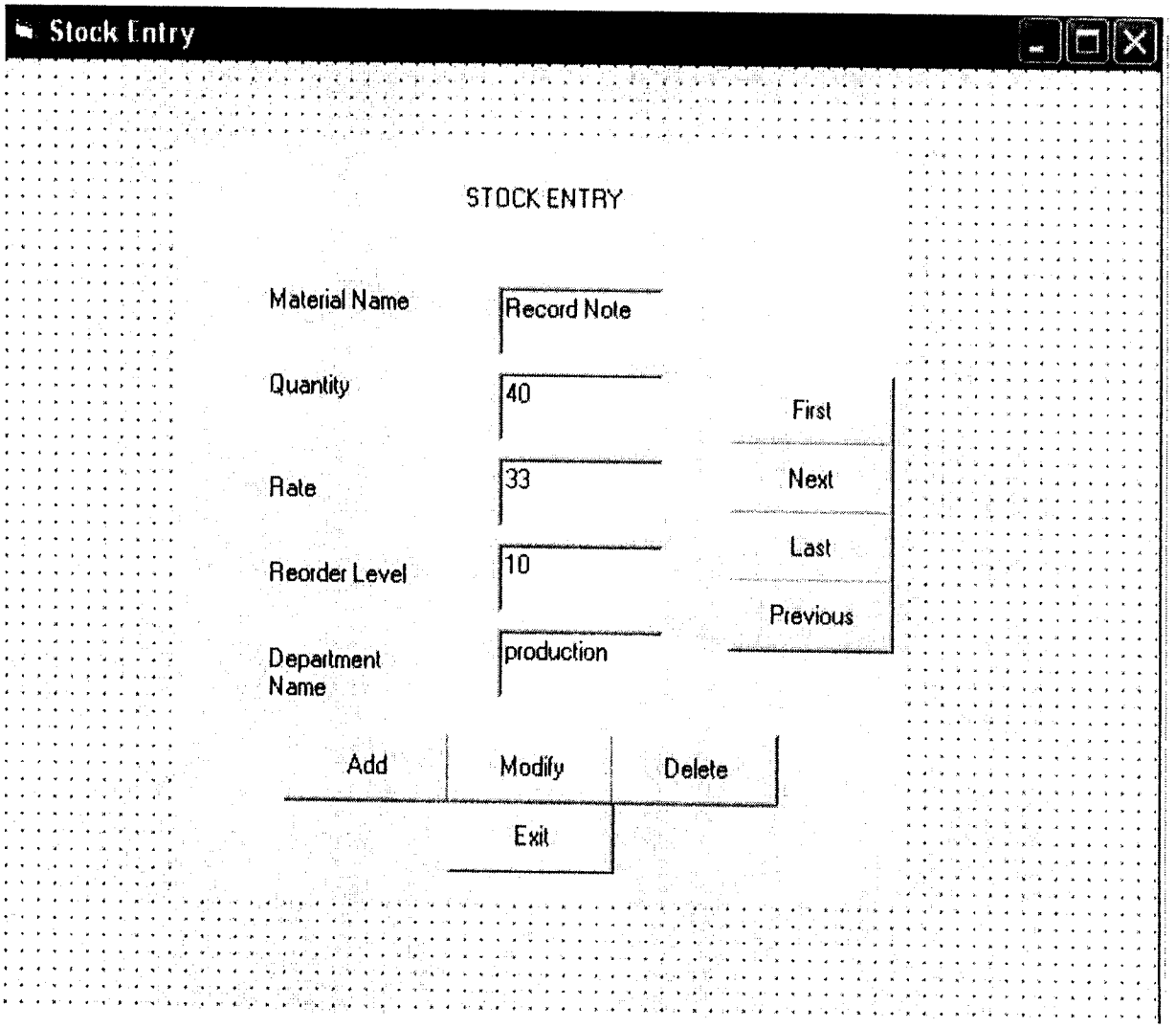
CHART-8

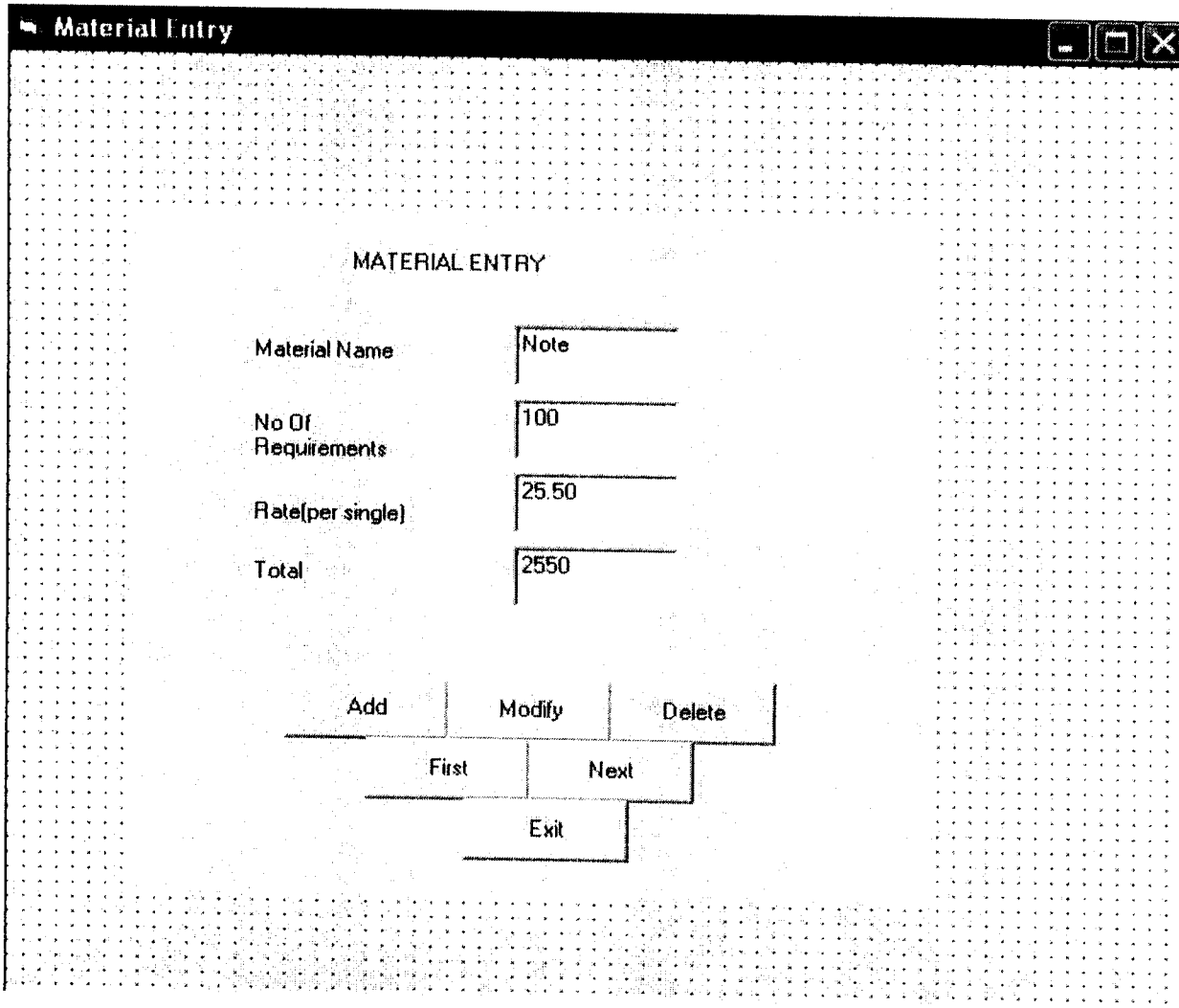

DISTRIBUTION OF RESPONDENTS ACCORDING TO EXPERIENCE
80
60
40
20
0
S1
percentage
experienced
inexperienced
experience

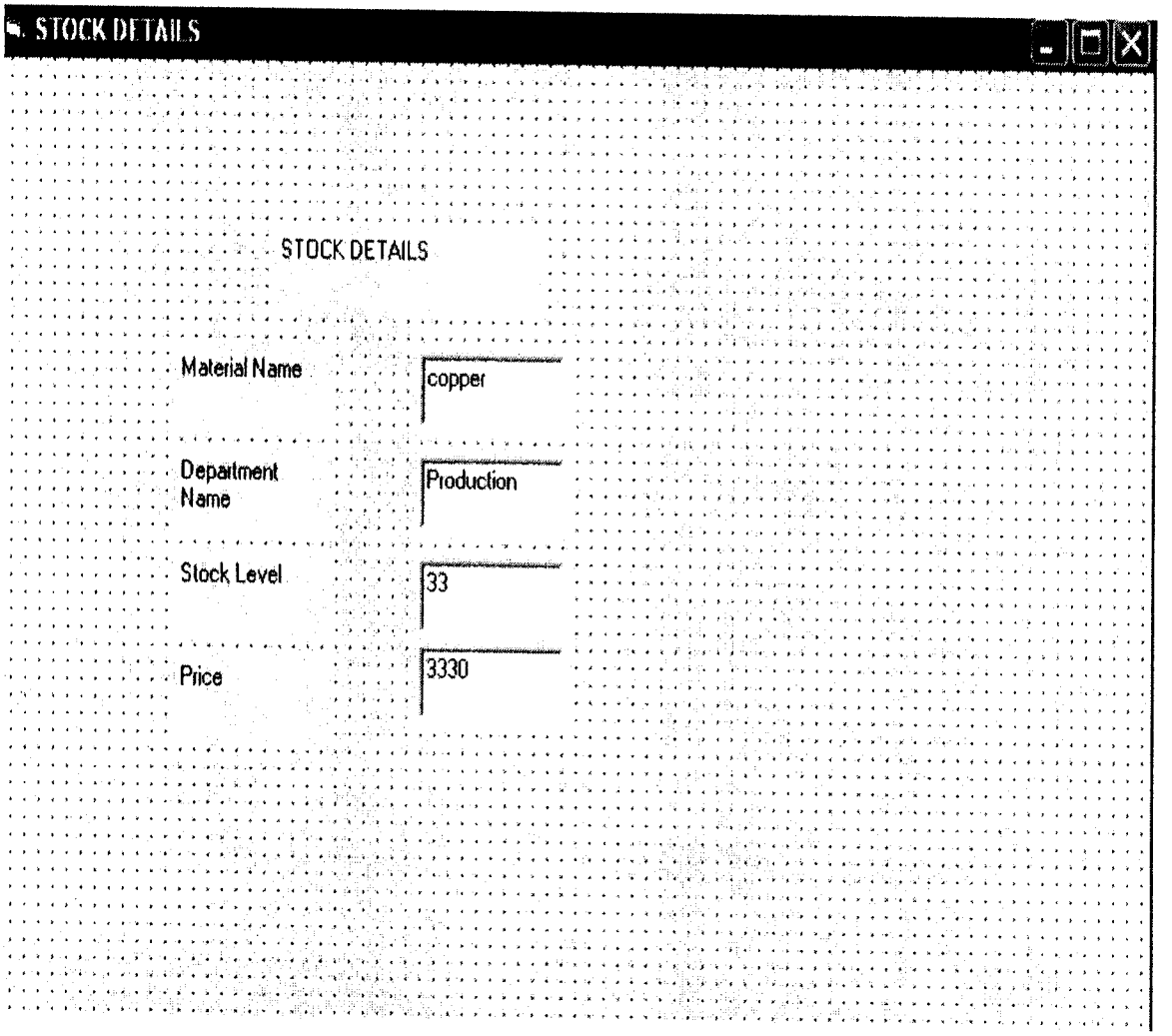
SAMPLE OUTPUTS


Login Screen
User ID
Depart
Password
****
Login
Discard


Result Information
RESULT INFORMATION
Material Details
Stock Information
Stock Entry
Material Entry


Stock Entry
STOCK ENTRY
Material Name
Record Note
Quantity
40
Rate
33
Reorder Level
10
Department Name
production
First
Next
Last
Previous
Add
Modify
Delete
Exit


Material Entry
MATERIAL ENTRY
Material Name
Note
No Of Requirements
100
Rate(per single)
25.50
Total
2550
Add
Modify
Delete
First
Next
Exit


STOCK DETAILS
STOCK DETAILS
Material Name
copper
Department Name
Production
Stock Level
33
Price
3330

CHAPTER 5

CONCLUSION

CHAPTER 5

CONCLUSION

5.1 FINDINGS

1. Among the respondents majority of the population that is 56.67 percent are male and the remaining 43.33 percent are female.

2. Majority of the population that is 54 percent of the respondents fall under the age group of 25-40 years, 41.33 percent of them fall under the age group of 18-24 years and the remaining 4.67 percent come under 41-60 years.

3. Majority of the population that is 42.67 percent of the respondents supports the problem faced while purchasing raw material is due to short life, 30 percent supports poor quality, 17.33 percent of them supports duplicate material and the remaining 10 percent supports low conductivity.

4. Majority of the population that is 40.67 percent of the respondents say work load in production department is low, 35.33 percent says work load is high, 16.67 percent says work load is very high and the remaining 7.33 percent says work load is very low.

5. Majority of the population that is 34 percent of the respondents supports problems faced while purchasing copper is due to fault in combination of the material ratio, 30 percent respondent supports poor quality, 24 percent respondent supports bending strength and the remaining 12 percent supports size of the product.

6. Majority of the population that is 35.33 percent of the respondents says that safety measurers in production department is good, 24 percent respondents says the safety measure is bad, 23.33 percent respondents says the safety measure is very bad and the remaining 17.34 percent respondents says the safety measure is very bad.

7. Majority of the population that is 47.33 percent of the respondents supports problems faced by employees in production department is health problems, 20.67 percent respondent supports less pay, 16.67 percent respondent supports heavy work load and the remaining 15.53 percent supports less safety.

8. Majority of the population that is 80 percent of the respondent s are inexperienced and 20 percent of them have previous experience.

RESULTS AND DISCUSSIONS

For a successful production planning, Materials management and stock maintenance should be considered. Materials management and stock maintenance deal with storing and retrieving details regarding the staffs and materials. This desktop utility provides an interface for storing and retrieving of different types of department details and staff details in an effective and efficient manner in terms of time, space and cost. Our project ensures flexibility, simplicity, versatility and accuracy. Employee problems in production department is identified and recommend the manager to take the necessary steps to rectify it.

CONSIDERED RECOMMENDATIONS

Special training camps to bring interest towards job can be arranged. Labour welfare measures should also be conceded because they play a major role in production activity. The charts shows major problems faced by the production department and those must be taken care in order to be more successful.

Production is a integral part of an organization , looking in to the welfare and well being of the employees will reflect an impact on performance level of the employees and which in turn will help in the country's economy as a whole.

ANNEXURE

QUESTIONNAIRE

1. Name:_____

2. Age:

   a. 18-24 ( ) b. 25-40 ( ) c. 41-60 ( )

3. Gender

   a. male ( ) b. Female ( )

4. Income level

   a. below 3000 ( ) b. 3000-9000 ( ) c. 9000-12000 ( )

   d. above 12000 ( )

5. The level of awareness about the welfare measures

   a. very high ( ) b. high ( ) c. low ( )

   d. very low ( )

6. Major Problems faced in the production department while purchasing raw materials

   a. Duplicate material ( ) b. Poor quality ( ) c. Short life ( )

   d. Low conductivity ( )

7. The level of satisfaction about your working environment

   a. Very high ( ) b. high ( ) c. Low ( )

   d. Very low ( )

8. What about the training level in your company

a. very good ( ) b. good ( ) c. bad ( )

d. Very bad ( )

9. How do you feel in your workload

a. very high ( ) b. high ( ) c. low ( )

d. very low ( )

10. What do you feel about the ventilation and the ambient temperature at the work place?

a. Excellent ( ) b. Good ( ) c. Poor ( )

d. Very Poor ( )

11. What do you feel about the precautionary measures done in case of an accidents?

a. Excellent ( ) b. Good ( ) c. Poor ( )

d. Very Poor ( )

12. What is your opinion about the building safety measures at the work place?

a. Excellent ( ) b. Good ( ) c. Poor ( )

e. Very Poor ( )

13. How are the first aid facilities at the work place?

a. Excellent ( ) b. Good ( ) c. Poor ( )

d. Very Poor ( )

14. How do you feel about the overall facilities provided by the company ?

a. Highly satisfied ( ) b. Satisfied ( ) c. Dissatisfied ( )

d. Highly Dissatisfied ( )

15. Major problems faced while purchasing copper ?

a. Size of the product ( ) b. combination of material ratio ( )

c. Bending strength ( ) d. Poor quality ( )

16. Major problem faced by employees in production department

a. Less safety ( ) b. Health problems ( ) c. Work load ( )

d. Less pay ( )

17. Position of an employee

a. Inexpensive ( ) b. Expensive ( )

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