

### 3.1 OFFICE PROCEDURES AND MANAGEMENT

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#### RATIONALE

The subject of office procedure and Management occupies an important place in the course contents for industrial and personnel management as well as for other different professional examination. The latest knowledge of this discipline is indispensable for the in-depth understanding of modern business world which has becoming highly professional and dynamic. The office is the most significant part of any organizations as being the nerve centre of it.

#### DETAILED CONTENTS

1. Office management – meaning importance, function and relations of the office with other departments (10 hrs)
2. Office organization – Centralization and decentralization of office services – merits and demerits, allocation and distribution of office work (10 hrs)
3. Office accommodation and layout – office location office layout, office building – their objectives and principles (12 hrs)
4. Office environment – Nature objectives internal and external environment, working facilities – lighting, seating, recreational facilities, safety and sanitary arrangement and pollution control etc (10 hrs)
5. Office correspondence – incoming and outgoing correspondence procedures and types of office post (4 hrs)
6. Office furniture and fittings (2 hrs)
7. Office communication – meaning, importance, types, internal and external communication (5 hrs)
8. Office records – meaning, significance essentials of a good filing system, traditional and modern filing methods and equipment (4 hrs)
9. Index – meaning, objectives and methods (3 hrs)
10. Office forms –meaning, significance, types and essentials of form designing (4 hrs)

**RECOMMENDED BOOKS**

1. Office Management and Procedure by RK Sharma, Shashi Gupta and Sushil Nayar; Kalyani Publication, Ludhiana
2. Office Management by PK Gupta
3. Office Management by Ghosh and Aggarwal
4. Office Management by Gupta, Bansal, Jain and Malik
5. Modern Office Management by Dr. IM Sahai
6. Office Management and Procedure by Singh and Chhabhria; Dhanpat Rai and Sons, New Delhi
7. Manual of Office Management and Correspondence by BN Tondon; S Chand and Co., Ram Nagar, New Delhi

**TUTORIAL ASSIGNMENTS**

1. Write a letter to the Deputy Commissioner requesting him for cleanliness of your locality
2. Write a letter to a prospective customer for introduction of the new product launched by your company
3. Write a letter to the claimant of your bank for settling his accounts for the loans taken by him.
4. Prepare resume of self
5. Write a letter to the President of a local NGO for getting help in the studies of a poor child
6. Draft a reminder to income tax office for getting refund of the self

## 3.2 ACCOUNTING AND FINANCE

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Hrs/week 4 2 -

### RATIONALE

The objective of this subject is to acquaint the students with basic concepts of accounting and finance to enable them in taking decisions in their jobs. Exercises will be used to develop computational ability and analytical skill in this field

### DETAILED CONTENTS

1. Accounting (15 hrs)  
Accounting, meaning, nature, function and usefulness, types of accounting, generally accepted principles and concepts, conventions, recording of transactions in: journal and subsidiary books, ledger, trial balance; preparation of final accounts with minor adjustments
2. Budgets and Budgetary Control (15 hrs)  
Meaning, advantage and limitations, preparation of various types of budgets, budgetary control reports to management, cost volume profit relationships, break even analysis, advantages and limitations of breakeven analysis
3. Finance (15 hrs)  
Meaning, nature and scope of finance functions, its relationship with other areas. Importance of finance in business and industry, goals of finance functions, functions of financial executives, organizational structure of finance department
4. Source of Finance (10 hrs)  
Short term, medium term and long term, financial planning capitalization, various financial institutions, principles of sound financial planning and control, factors affecting financial planning
5. Ratio Analysis (10 hrs)  
Nature, importance, types and working knowledge of important ratios including practical aspect current ratio, liquidity ratio, debt ratio, capital equity ratio

**RECOMMENDED BOOKS**

1. Principles of Accounting by BS Grewal, Sultan Chand and Sons
2. Financial Management by Dr NK Sahni, Kalyani Pubication
3. Principles of Accounting by saddique
4. Cost Accounting by Jain and Nargang, Kalyani Publishers, New Delhi
5. Financial Management by IM Pandey; Vallabh Publications
6. Financial Management by SC Khuchhal, Himalaya Publications

**Note: Question Paper should have at least two numerical problems**

**TUTORIAL ASSIGNMENTS**

1. Scope of financial management
2. Computerized accounting system
3. Brief study of various functional areas of financial management
4. Preparation and interpretation of statement

### 3.3 COMPUTER APPLICATIONS

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#### RATIONALE

Computer plays a very vital role in present day life, more so, in the professional life of diploma engineers. In order to enable the students use the computers effectively in problem solving, this course offers the modern programming language C along with exposure to various engineering applications of computers. The knowledge of C language will be reinforced by the practical exercises during the course of study. Introduction to data base management systems is also a very significant field with vast employment potential.

#### DETAILED CONTENTS

1. Algorithm and programme Development: (2hrs)
  - 1) Steps in development of a programme.
  - 2) Flow-charts, algorithm development.
  - 3) Programme Designing.
  - 4) Introduction to computer languages, interpreter, compiler HLL/ML/Assembly Language
  
2. Programme Structure (C Programming) (2hrs)
  
3. I/O statements, assignment, variables, arithmetic operation- their precedence Data types standard I/O function, formulated I/O
  
4. Control Statements: (2hrs)
 

If else logical and relational operators while do-while, breaks switch statements.
  
1. Functions: (2hrs)
 

Function declaration, parameter passing cell- by value storage classes (local, global and static variables)
  
2. Arrays (2hrs)
 

Single and multi dimensional arrays, character arrays.
  
3. Pointers: (3hrs)
 

Pointers to various data types, pointers in parameter passing pointers to function.
  
4. Structures : (2hrs)
 

Definition of a structure, pointers to structure, and union, array of structure.

5. Strings: (2hrs)  
String processing, functions and standard library functions.
6. Files : (3hrs)  
File manipulation using standard function type mouses.
7. Information storage and retrieval using RDBMS software like Fox Pro/MS access/Oracle (8 hrs)
  - a) Need for information storage and retrieval
  - b) Overview of data bases
  - c) Creating database file
  - d) Querying database file on single and multiple keys
  - e) Ordering (sorting) the data on a selected key
  - f) Programming a very simple applications
8. Typical Applications: (4 hrs)  
Students will be required to make a small programme for analysis of circuits design in Electrical Engineering components or any other area.

### **LIST OF PRACTICALS**

1. Use of spread sheets/Matlan/Mathematica/Eureka (or any other package) for engineering computers.
2. Use of design packages (appropriate design packages may be selected depending upon the availability) on Estimating and Costing, Analysis of rates and other areas
3. Use of CAI packages.
4. Programming for DAS and control.
5. Exercises on data acquisition.
6. Exercises on control - on/off switch, and proportional control.
7. Programming exercise on executing C program
8. Programming exercise on editing C program
9. Programming exercise on defining variables and assigning values to variables.
10. Programming exercise on arithmetic and relational operators.
11. Programming exercises on arithmetic expressions and their evaluation.

12. Programming exercise on reading a character.
13. Programming exercise on writing a character.
14. Programming exercise on formatting input using print.
15. Programming exercise on formatting output using scan.
16. Programming exercise on simple if statement.
17. Programming exercise on IF .... else statement.
18. Programming exercise on switch statement.
19. Programming exercise on go to statement.
20. Programming exercise on do-while statement.
21. Programming exercise on for statement.
22. Programming exercise on one-dimensional arrays.
23. Programming exercise on two-dimensional arrays.
24. Creating database.
25. Querying the database.
26. Report generation.
27. Programming in dbase
28. Exercises on
  - Internet use/application
  - Typical application on Electrical Engineering

### **INSTRUCTIONAL STRATEGY**

This is a highly practical and self-study oriented courses. The teachers are expected to explain the theoretical part and then immediately test the student's writs and run the programme based on that topic and read world problems

### **RECOMMENDED BOOKS**

1. Programming in C by Sachaum Series, McGraw Hills
2. Programming in C by Kerning Lan and Riechie Prentice Hall of India, New Delhi

3. Programming in C by Balaguru Swamy, Tata McGraw Hill, New Delhi
4. Let us C – Yashwant Kanetkar, BPB Publications, New Delhi
5. Vijay Mukhi Series for C and C++
6. Programming in C by R Subburaj, Vikas Publishing House Pvt. Ltd., Jangpura, New Delhi
7. Programming in C by Kris A Jansa, Galgotia Publications Pvt. Ltd., Daryaganj, New Delhi
8. Programming in C by BP Mahapatra, Khanna Publishers, New Delhi
9. Elements of C by MH Lewin, Khanna Publishers, New Delhi

### 3.4 TOTAL QUALITY MANAGEMENT

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#### RATIONALE

The main objective of the course is to familiarize the students with various aspects of total quality management. The students are to be made aware of various aspects of total quality management and their implications.

#### DETAILED CONTENTS

1. Introduction:  
Definition of quality, total quality, and total quality management; total quality management gurus- Deming, Juran, Crosby, Taguchi, Ishikawa, Feigenbaum, evolution of quality concept, need for quality management in context of ongoing reform processes
2. Components of Total Quality Management  
Total employee involvement, statistical quality control, just in time, and waste elimination
3. Cost of Quality:  
Failure cost, appraisal cost, prevention cost and others.
4. Miscellaneous Aspects of Total Quality Management:  
  
ISO 9001 : 2000 – quality management system; Elementary knowledge of KAIZEN; Plan, Do, Check, Act cycle (PDCA cycle); quality circle, Problem solving tools; team building, small group activities; and suggestion schemes, environment management system (ISO 14001); quality awards, benchmarking, re-engineering, training and re-training, design quality management; employees empowerment; vendor development. Statistical Process Control.

#### RECOMMENDED BOOKS

1. Total Quality Management by Dr. DD Sharma Sultan Chand and Sons, New Delhi
2. Small Business Success through TQM by Terry Ethresman, Tata McGraw Hill
3. Total Quality Control Essentials by Sarv Singh Soin, McGraw Hill, New York
4. Total Quality Control by Juran JM and Gyra JF
5. Journal of Quality and Participation, Association of Quality Participation, Ohio State, USA
6. Handbook on Quality Planning and Control by Jkuran JN

**TUTORIAL ASSIGNMENTS**

1. Prepare a case study of a company which has obtained ISO-9000
2. Prepare a case study of a company which has obtained ISO-14001
3. Document experiences of a company which has implemented TQM and some of its aspects like Kaizen, suggestion schemes, and quality circles
4. Zero defects and waste elimination, concepts explanation
5. Benchmarking as a tool of total quality management
6. Need of re-engineering in quality management

### 3.5 PRODUCTION AND MATERIALS MANAGEMENT

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#### RATIONALE

To keep the students abreast with the basic concept of production and material management of production management, material handling, material conservation, production planning and control, materials management inspections, rejection, work quality control, store management and inventory management becomes essential.

#### DETAILED CONTENTS

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| 1. | Production Management<br>Concept, role, relevance and scope of production management, different types of production, production facilities, plant location, plant layout | (12 hrs) |
| 2. | Material handling  | (4 hrs)  |
| 3. | Production, planning and control   | (8 hrs)  |
|    | 3.1 Concepts of PERT, CPM, (Introduction)  |          |
|    | 3.2 Routing, scheduling, dispatching and expediting  |          |
|    | 3.3 Concept of value addition  |          |
| 4. | Materials management<br>Concept, objectives and scope of materials management, purchasing systems, make or buy decisions   | (12 hrs) |
| 5. | Inspections and rejection/rework   | (6 hrs)  |
| 6. | Quality control - general concepts   | (6 hrs)  |
| 7. | Stores management<br>Economic Order Quantity(EOQ), ABC analysis, short shelf life items Bin card system  | (8 hrs)  |
| 8. | Inventory Management –JIT concept, First in, First out (FIFO), Last in, First out(LIFO)  | (8 hrs)  |

#### RECOMMENDED BOOKS

1. Elements of Mercantile Law by ND Kapoor, Dhanpat Rai and Sons
2. Mercantile Law by Garg and Chawla
3. Mercantile Law by Avtar Singh Eastern Lucknow

4. Guide to Companies Act by Ramaiya A, Wadhwa Nagpur
5. Production and Operation Management by BS Goel, Pragati Prakashan Meerut
6. Production Management by Lockyar
7. Material Management by Gopal Krishan and Sundram, Prentice Hall

### **TUTORIAL ASSIGNMENTS**

1. Discuss positive and negative points of locating your institution at Mandi Adampur
2. Draw a layout for the office of head of department (Management) under present circumstances
3. Use PERT in the evaluation of the performance of a student for personality development
4. Inspect various stores/laboratories in the institution and submit physical report
5. Suggest various methods to improve the quality of a student for the best use of him for the development of the country
6. Develop a system in stores for the institution by using ABC analysis for effective materials management of your institution

### 3.6 INDEPENDENT STUDY AND PRESENTATION

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This course had been introduced for the first time to have novel experience with the aim of developing in students the communication (written and oral) ability and habit of self study which will make them self learners. This is not a subject for which there is external theory examination.

Through this course, the students will have the opportunity of self and independent study by searching literature. They will prepare papers and presentations. The teachers will provide topics for self learning.

There will be internal and external assessment for the work done and performance.

The topics must be chosen from the curriculum only. Situational approach should be adopted through case studies relating to real life of individual, family, organisation etc. in Indian or international context.

Following will be the assessment criteria:

Preparation of study paper	-	40%
Presentation and viva	-	60%

**Note:**

**Concerned teacher(s) should prepare an exhaustive list of topics for independent study and presentation. The student may select the topic of his/her interest in consultation with teacher.**