This well-known text-book provides an up-to-date account of the basic knowledge of Building Construction. The subject matter is expressed in a simple language and practical manner. The treatment is clear, methodical as well as interesting and easy to follow.

The entire subject matter is systematically arranged in the chapters like: Introduction; Functional Planning of Buildings; Important Building Components; Site Investigation and Ground Techniques; Foundations; Deep Excavations; Deep Foundations (Pile Foundations); Cofferdams; Caissons; Stone Masonry; Brick Masonry; Structures in Brickwork; Partitions; Scaffolding, Shoring and Underpinning; Damp-proofing, Water-proofing and Termite-proofing; Cement Concrete Construction; Arches; Lintels; Stairs; Formwork; Doors, Windows and Ventilators; Carpentry and Joinery; Floors and Flooring; Roofs; Pointing and Plastering; Painting, Varnishing and Distempering etc.; Structural Steelwork; Acoustics; Fire Protection in Buildings; Ventilation and Air-conditioning; Construction Equipments; CPM and PERT.

Part 1 and Part 2 of this book is merged and all the chapters are rearranged to maintain continuity. The chapters Introduction, Functional Planning of Buildings and Important Building Components are totally new and are included as per new syllabus. Also chapter of Site investigation and ground techniques is separated from the chapter of Foundation. In the chapter of Construction Equipments, almost all the types of construction equipments and machineries which are normally used in civil engineering projects have been included. A few new problems on CPM and PERT are also added.

The book in its 32 chapters now contains:

- 860 Self-explanatory and neatly drawn sketches
- 115 Useful tables
- 60 Solved problems
- 575 Questions at the ends of all the chapters.

The book should prove to be extremely useful to the Engineering students preparing for the Degree Examinations of all the Indian Universities, Diploma Examinations conducted by various Boards of Technical Education, Certificate Courses as well as for the A.M.I.E., U.P.S.C., G.A.T.E., I.E.S. and other similar competitive and professional examinations. It is also useful for the preparation of NATA (National Aptitude Test for Architecture), CEPT (Centre for Environmental Planning and Technology), SBST (School of Building Science and Technology), SID (School of Interior Design), AIEEE (Architecture), etc. It should also prove of interest to the practising professionals.
Chapter 1 INTRODUCTION
1-1. General
1-2. Types of buildings
1-2-1. Group A: Residential buildings
1-2-2. Group B: Educational buildings
1-2-3. Group C: Institutional buildings
1-2-4. Group D: Assembly buildings
1-2-5. Group E: Business buildings
1-2-6. Group F: Mercantile buildings
1-2-7. Group G: Industrial buildings
1-2-8. Group H: Storage buildings
1-2-9. Group I: Hazardous buildings
1-3. Structural system of building
1-4. Comparison of load bearing structure with framed structure
1-5. Loads on foundations

Questions 1

Chapter 2 FUNCTIONAL PLANNING OF BUILDINGS
2-1. General
2-2. Principles of Site Selection
2-3. Site Plan
2-4. Planning regulations and bye-laws
2-5. Principles of planning
2-6. Modern architecture
2-7. Main considerations of architectural design
2-7-1. Bye-laws of the locality
2-7-2. Climate and its effects
2-7-3. Materials and methods of construction
2-7-4. People and their requirements
2-8. Orientation
2-9. Essential factors of planning

Questions 2

Chapter 3 IMPORTANT BUILDINGS COMPONENTS
3-1. General
3-2. Basic functional requirements of a building
3-3. Important Building Components

Questions 3

Chapter 4 SITE INVESTIGATION AND GROUND TECHNIQUES
4-1. General
4-2. Depth of exploration
4-3. Methods of site exploration
4-4. Choice of the method
4-5. Bearing Capacity of soil
4-6. Methods for determining the bearing capacity of soil
4-7. Increasing the bearing capacity of soil

Questions 4

Chapter 5 FOUNDATIONS
5-1. General
5-2. Objects of foundations
5-3. Essential requirements of a good foundation
5-4. Shallow foundations
5-5. Design of shallow foundations
5-6. Special foundations
5-7. Eccentric loading on foundation
5-8. Combined footing
5-9. Cantilever footing
5-10. Continuous footing
5-11. Foundations of black cotton soil
5-12. Stepped foundations
5-13. Foundations on reclaimed soil or made-up ground
5-14. Foundations on cavities and old wells
5-15. Foundations near existing adjacent old structures
5-16. Foundations for machines
5-17. Causes of failure of foundations and Preventive measures
5-18. Method of setting out the foundation trenches

Questions 5

Chapter 6 DEEP EXCAVATIONS
6-1. Definition
6-2. Problems of deep excavations
6-3. Some terms in timbering
6-4. Methods of timbering
6-5. Precautions to be taken during timbering
6-6. Dewatering of the foundation trenches

Questions 6

Chapter 7 DEEP FOUNDATIONS (PILE FOUNDATIONS)
7-1. General
7-2. Uses of piles
7-3. Types of piles
7-4. Load bearing piles
7-5. Materials used in construction of load bearing piles
7-6. Cast-iron piles
7-7. Cement concrete piles
7-7-1. Cast-in-situ concrete piles
7-7-2. Pre-cast concrete piles
7-8. Sand piles
7-9. Steel piles
7-10. Timber piles
7-11. Wrought-iron piles
7-12. Non-load bearing piles
7-13. Choice of type of pile
7-14. Composite piles
7-15. Screw piles
7-16. Pile spacing
7-17. Group of piles
7-18. Efficiency of group of piles
7-19. Pile cap and pile shoe
7-20. Load tests on piles
7-21. Pile driving
7-21-1. Pile frames
7-21-2. Pile hammers
7-21-3. Leads
7-21-4. Winches
7-21-5. Miscellaneous
7-22. Pulling of piles
7-23. Loads on piles
7-24. Causes of failures of piles
7-25. Pile driving formulas
7-26. Typical problems using pile driving formulas

Questions 7

Chapter 8 COFFERDAMS
8-1. General
8-2. Uses of cofferdams
8-3. Types of cofferdams
8-3-1. Dikes
8-3-2. Single wall cofferdams
8-3-3. Double wall cofferdams
8-3-4. Cellular cofferdams
8-3-5. Rock-filled crib cofferdams
8-3-6. Concrete cofferdams
8-3-7. Suspended cofferdams
8-4. Prevention of leakage in cofferdams
8-5. Puddle for cofferdam
8-6. Factors affecting design of a cofferdam

Questions 8

Chapter 9 CAISSONS
9-1. General
9-2. Uses of caissons
9-3. Caisson and caisson
9-4. Materials used for the construction of caissons
9-5. Classification of caissons
9-6. Box caissons
9-7. Wells
9-8. Pneumatic caissons

Questions 9
# Building Construction

## Detailed Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-9.</td>
<td>Construction of a pneumatic caisson</td>
</tr>
<tr>
<td>9-10.</td>
<td>Pneumatic caisson sickness</td>
</tr>
<tr>
<td>9-11.</td>
<td>Drilled caissons</td>
</tr>
<tr>
<td>9-12.</td>
<td>Methods of construction of drilled caisson</td>
</tr>
<tr>
<td>9-13.</td>
<td>Precautions during construction of drilled caisson</td>
</tr>
<tr>
<td>9-14.</td>
<td>Loads on caisson</td>
</tr>
<tr>
<td>9-15.</td>
<td>Floating of caissons</td>
</tr>
<tr>
<td>9-16.</td>
<td>Cutting edges</td>
</tr>
<tr>
<td>9-17.</td>
<td>Factors affecting the choice of a cutting edge</td>
</tr>
<tr>
<td>9-18.</td>
<td>Skin friction</td>
</tr>
<tr>
<td>9-19.</td>
<td>Sand blowing</td>
</tr>
<tr>
<td>9-20.</td>
<td>Methods to facilitate the sinking of caissons</td>
</tr>
<tr>
<td>9-21.</td>
<td>Tilting of caissons</td>
</tr>
</tbody>
</table>

**Questions 9**

## Chapter 10 Stone Masonry

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-1.</td>
<td>Definition</td>
</tr>
<tr>
<td>10-2.</td>
<td>Materials required for stone masonry</td>
</tr>
<tr>
<td>10-3.</td>
<td>Some definitions</td>
</tr>
<tr>
<td>10-4.</td>
<td>Joints in stone masonry</td>
</tr>
<tr>
<td>10-5.</td>
<td>Classification of stone masonry</td>
</tr>
<tr>
<td>10-6.</td>
<td>Safe permissible loads on stone masonry</td>
</tr>
<tr>
<td>10-7.</td>
<td>Tools used in stone masonry</td>
</tr>
<tr>
<td>10-8.</td>
<td>Dressing of stone surfaces</td>
</tr>
<tr>
<td>10-9.</td>
<td>Appliances for lifting stones</td>
</tr>
<tr>
<td>10-10.</td>
<td>Points to be observed while supervising the stonework</td>
</tr>
</tbody>
</table>

**Questions 10**

## Chapter 11 Brick Masonry

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-1.</td>
<td>General</td>
</tr>
<tr>
<td>11-2.</td>
<td>Size and weight of bricks</td>
</tr>
<tr>
<td>11-3.</td>
<td>Some definitions</td>
</tr>
<tr>
<td>11-4.</td>
<td>Types of brick masonry</td>
</tr>
<tr>
<td>11-5.</td>
<td>Safe permissible loads on brick masonry</td>
</tr>
<tr>
<td>11-6.</td>
<td>Tools used in brick masonry</td>
</tr>
<tr>
<td>11-7.</td>
<td>Bonds in brickwork</td>
</tr>
<tr>
<td>11-8.</td>
<td>Bonds at connections</td>
</tr>
<tr>
<td>11-9.</td>
<td>Thickness of walls in brickwork</td>
</tr>
<tr>
<td>11-10.</td>
<td>Supervision of the brickwork</td>
</tr>
<tr>
<td>11-11.</td>
<td>Defects in brick masonry</td>
</tr>
<tr>
<td>11-12.</td>
<td>Cracking in brick masonry walls</td>
</tr>
<tr>
<td>11-13.</td>
<td>Comparison of brickwork and stonework</td>
</tr>
<tr>
<td>11-14.</td>
<td>Composite masonry</td>
</tr>
</tbody>
</table>

**Questions 11**

## Chapter 12 Structures in Brickwork

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-1.</td>
<td>General</td>
</tr>
<tr>
<td>12-2.</td>
<td>Brick Footings</td>
</tr>
<tr>
<td>12-3.</td>
<td>Piers</td>
</tr>
<tr>
<td>12-4.</td>
<td>Buttresses</td>
</tr>
<tr>
<td>12-5.</td>
<td>Retaining walls and breast walls</td>
</tr>
<tr>
<td>12-6.</td>
<td>Thresholds</td>
</tr>
<tr>
<td>12-7.</td>
<td>Window sills</td>
</tr>
<tr>
<td>12-8.</td>
<td>Jambs</td>
</tr>
<tr>
<td>12-9.</td>
<td>Corbels</td>
</tr>
<tr>
<td>12-10.</td>
<td>Copings</td>
</tr>
<tr>
<td>12-11.</td>
<td>Ornamental brickwork</td>
</tr>
<tr>
<td>12-12.</td>
<td>Circular brickwork</td>
</tr>
<tr>
<td>12-13.</td>
<td>Fireplaces and flues</td>
</tr>
<tr>
<td>12-14.</td>
<td>Tall chimneys</td>
</tr>
<tr>
<td>12-15.</td>
<td>Cavity walls</td>
</tr>
<tr>
<td>12-15-1.</td>
<td>Reasons of providing a cavity or a hollow space in a wall</td>
</tr>
<tr>
<td>12-15-2.</td>
<td>Details of construction</td>
</tr>
<tr>
<td>12-15-3.</td>
<td>Features of a cavity wall</td>
</tr>
<tr>
<td>12-16.</td>
<td>Reinforced brickwork</td>
</tr>
</tbody>
</table>

**Questions 12**

## Chapter 13 Partitions

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-1.</td>
<td>Definition</td>
</tr>
<tr>
<td>13-2.</td>
<td>Requirements of partition walls</td>
</tr>
</tbody>
</table>

**Questions 13**

## Chapter 14 Scaffolding, Shoring and Underpinning

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-1.</td>
<td>General</td>
</tr>
<tr>
<td>14-2.</td>
<td>Scaffolding</td>
</tr>
<tr>
<td>14-3.</td>
<td>Component parts of a scaffolding</td>
</tr>
<tr>
<td>14-4.</td>
<td>Types of scaffolding</td>
</tr>
<tr>
<td>14-5.</td>
<td>Points to be attended to in scaffolding</td>
</tr>
<tr>
<td>14-6.</td>
<td>Shoring</td>
</tr>
<tr>
<td>14-7.</td>
<td>Types of shoring</td>
</tr>
<tr>
<td>14-8.</td>
<td>Underpinning</td>
</tr>
<tr>
<td>14-9.</td>
<td>Points to be attended before underpinning</td>
</tr>
<tr>
<td>14-10.</td>
<td>Methods of underpinning</td>
</tr>
<tr>
<td>14-10-1.</td>
<td>Pit method</td>
</tr>
<tr>
<td>14-10-2.</td>
<td>Pile method</td>
</tr>
<tr>
<td>14-10-3.</td>
<td>Miscellaneous methods</td>
</tr>
</tbody>
</table>

**Questions 14**

## Chapter 15 Damp-proofing, Water-proofing and Termite-proofing

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-1.</td>
<td>General</td>
</tr>
<tr>
<td>15-2.</td>
<td>Damp-proofing</td>
</tr>
<tr>
<td>15-2-1.</td>
<td>Causes of dampness</td>
</tr>
<tr>
<td>15-2-2.</td>
<td>Effects of dampness</td>
</tr>
<tr>
<td>15-2-3.</td>
<td>Requirements of an ideal material for damp-proofing</td>
</tr>
<tr>
<td>15-2-4.</td>
<td>Materials used for damp-proofing</td>
</tr>
<tr>
<td>15-2-5.</td>
<td>General principles of damp-proofing</td>
</tr>
<tr>
<td>15-2-6.</td>
<td>Methods of damp-proofing</td>
</tr>
<tr>
<td>15-3.</td>
<td>Water-leakage</td>
</tr>
<tr>
<td>15-3-1.</td>
<td>Reasons and preventive measures for water leakage</td>
</tr>
<tr>
<td>15-3-2.</td>
<td>Water-proofing of flat roofs</td>
</tr>
<tr>
<td>15-4.</td>
<td>Termite-proofing</td>
</tr>
<tr>
<td>15-4-1.</td>
<td>Types of termites</td>
</tr>
<tr>
<td>15-4-2.</td>
<td>General principles of termite-proofing</td>
</tr>
<tr>
<td>15-4-3.</td>
<td>Methods of termite-proofing</td>
</tr>
<tr>
<td>15-5.</td>
<td>Summary</td>
</tr>
</tbody>
</table>

**Questions 15**

## Chapter 16 Cement Concrete Construction

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-1.</td>
<td>Definition</td>
</tr>
<tr>
<td>16-2.</td>
<td>Properties of cement concrete</td>
</tr>
<tr>
<td>16-3.</td>
<td>Materials used in R.C.C. work</td>
</tr>
<tr>
<td>16-4.</td>
<td>Corrosion of steel in concrete</td>
</tr>
<tr>
<td>16-5.</td>
<td>Sea water for making concrete</td>
</tr>
<tr>
<td>16-6.</td>
<td>Proportioning concrete</td>
</tr>
<tr>
<td>16-7.</td>
<td>Grading of aggregates</td>
</tr>
<tr>
<td>16-8.</td>
<td>Water-cement ratio</td>
</tr>
<tr>
<td>16-9.</td>
<td>Workability</td>
</tr>
<tr>
<td>16-10.</td>
<td>Estimating yield of concrete</td>
</tr>
<tr>
<td>16-11.</td>
<td>Bulking of sand</td>
</tr>
<tr>
<td>16-12.</td>
<td>Mixing the materials of concrete</td>
</tr>
<tr>
<td>16-13.</td>
<td>Transporting and placing of concrete</td>
</tr>
<tr>
<td>16-14.</td>
<td>Consolidation of concrete</td>
</tr>
<tr>
<td>16-15.</td>
<td>Curing of concrete</td>
</tr>
<tr>
<td>16-16.</td>
<td>Coloured concrete</td>
</tr>
<tr>
<td>16-17.</td>
<td>Lightweight concrete</td>
</tr>
<tr>
<td>16-18.</td>
<td>No-fines concrete</td>
</tr>
<tr>
<td>16-19.</td>
<td>Joints in concrete structures</td>
</tr>
</tbody>
</table>

**Questions 16**
Chapter 17 ARCHES

17-1. General
17-2. Definition
17-3. Technical terms
17-4. Types of arches
17-4-1. Classification of arches according to shape
17-4-2. Classification of arches according to number of centres
17-4-3. Classification of arches according to workmanship
17-4-4. Classification of arches according to materials of construction
17-5. Stability of an arch
17-6. Centering for arches

Questions 17

Chapter 18 LINTELS

18-1. Definition
18-2. Materials for lintels

Questions 18

Chapter 19 STAIRS

19-1. General
19-2. Technical terms
19-3. Ramps
19-4. Types of stairs
19-5. Moving stairs (Escalators)
19-6. Stairs of different materials
19-7. Requirements of a good stair

Questions 19

Chapter 20 FORMWORK

20-1. General
20-2. Requirements of formwork
20-3. Cost of formwork
20-4. Materials used for preparing formwork
20-5. Formwork for column footings
20-6. Formwork for columns
20-7. Formwork for floors
20-8. Formwork for walls
20-9. Formwork for stairs
20-10. Form linings
20-11. Slip forms
20-12. Removal of formwork
20-13. Centering for big arches
20-14. Types of centering
20-15. Formwork for domes
20-16. Failure of formwork
20-17. Maintenance of formwork

Questions 20

Chapter 21 DOORS, WINDOWS AND VENTILATORS

21-1. General
21-2. Important considerations for doors and windows
21-3. Technical terms
21-4. Types of doors
21-5. Types of windows
21-6. Ventilators
21-7. Mosquito-proofing
21-8. Fixtures and fastenings for doors and windows

Questions 21

Chapter 22 CARPENTRY AND JOINERY

22-1. Meaning of the terms
22-2. Technical terms in carpentry
22-3. Principles governing the construction of joints
22-4. Classification of joints
22-4-1. Lengthening joints
22-4-2. Widening joints
22-4-3. Angle joints
22-4-4. Oblique-shouldered joints
22-4-5. Bearing joints
22-4-6. Framing joints
22-5. Fastenings
22-6. Tools used in carpentry

Questions 22

Chapter 23 FLOORS AND FLOORING

23-1. Definitions
23-2. Types of floors
23-2-1. Timber floors
23-2-2. Composite floors
23-3. Types of floorings
23-4. Factors affecting choice of flooring material
23-5. Materials used for flooring

Questions 23

Chapter 24 ROOFS

24-1. General
24-2. Requirements of a good roof
24-3. Classification of roofs
24-4. Pitched or sloping roofs
24-5. Types of pitched roofs
24-6. Advantages of steel trusses over the timber trusses
24-7. Roof coverings for pitched roofs
24-8. Ventilators in pitched roofs
24-9. Methods to secure pitched roofs against uplift
24-10. Flat or terrace roofs
24-11. Curved roofs
24-12. Drainage of pitched and flat roofs

Questions 24

Chapter 25 POINTING AND PLASTERING

25-1. General
25-2. Objects of pointing and plastering
25-3. Pointing
25-4. Plastering
25-5. External finishes
25-6. Special materials for plastered surfaces
25-7. Fibrous plaster boards
25-8. Colour pigments for plaster

Questions 25

Chapter 26 PAINTING, VARNISHING AND DISTEMPERING, ETC.

26-1. General
26-2. Painting
26-2-1. Characteristics of an ideal paint
26-2-2. Pigment volume concentration number (P.V.C.N.)
26-2-3. Ingredients of an oil borne paint
26-2-4. Types of paints
26-2-5. Notes for guidance in the process of painting
26-2-6. Painting on different surfaces
26-2-7. Failure of paint
26-2-8. Defects in painting
26-3. Varnishing
26-3-1. Characteristics of an ideal varnish
26-3-2. Ingredients of a varnish
26-3-3. Types of varnishes
26-3-4. Process of varnishing
26-4. Distempering
26-4-1. Properties of distempers
BUILDING CONSTRUCTION
DETAILED CONTENTS

26-4-2. Ingredients of a distemper
26-4-3. Process of distempering
26-5. Wall paper
26-6. Whitewashing
26-7. Colourwashing
Questions 26

Chapter 27 STRUCTURAL STEELWORK
27-1. General
27-2. Rolled steel shapes
27-3. Built-up sections
27-4. Connections in steelwork
Questions 27

Chapter 28 ACOUSTICS
28-1. General
28-2. Velocity of sound
28-3. Frequency & intensity of sound
28-4. Timbre
28-5. Measurement of sound
28-5-1. Influence of environment
28-6. Sound in enclosures
28-7. Reflection of sound
28-8. Defects due to reflected sound
28-9. Absorption of sound
28-10. Sabin’s equation
28-11. Absorbent materials
28-12. Types of absorbent materials
28-13. Conditions for good acoustics of an auditorium or a hall
28-14. Factors to be considered in the acoustic design of an auditorium
28-15. Defects in an auditorium and their remedies
28-16. Acoustics of studios
28-17. Noise and its effects
28-18. Noise mapping
28-19. Types of noises
28-20. Transmission of noise
28-21. Sound insulation
28-22. Transmission loss
28-23. Acceptable noise levels
28-24. Methods of sound insulation
28-24-1. When source of noise is in the room itself
28-24-2. When noise is air-borne
28-24-3. When noise is structure-borne
Questions 28

Chapter 29 FIRE PROTECTION IN BUILDINGS
29-1. General
29-2. Causes and effects of fire
29-3. Fire hazards
29-4. Fire-load
29-5. Limiting fire spread
29-6. Grading of structural elements and buildings
29-7. Characteristics of fire-resisting material
29-8. Fire-resisting properties of common building materials
29-9. General rules for fire-resisting buildings
29-10. Fire protection systems
29-11. Strong-room construction
29-12. General rules for earthquake resistant buildings
29-13. Thermal insulation of buildings
29-14. Thermal insulation of exposed doors and windows
29-15. Thermal insulation of exposed roofs
29-16. Thermal insulation of exposed walls
Questions 29

Chapter 30 VENTILATION AND AIR-CONDITIONING
30-1. Necessity of ventilation
30-2. Factors affecting ventilation
30-3. Requirements of a good ventilating system
30-4. Types of ventilation
30-5. Air-conditioning
30-5-1. Definition of Air-conditioning
30-5-2. Purposes of Air-conditioning
30-5-3. Filters for Air-conditioning
30-5-4. Heating
30-5-5. Cooling
30-5-6. Humidification
30-5-7. Dehumidification
30-5-8. Summer air-conditioning
30-5-9. Winter air-conditioning
30-5-10. Air distribution
30-5-11. Systems of air-conditioning
Questions 30

Chapter 31 CONSTRUCTION EQUIPMENTS
31-1. General
31-2. Classification of equipments
31-3. Selection of equipments
31-4. Standard equipments
31-5. Special equipments
31-6. Owning and operating cost of equipment
31-7. Economic life of construction equipments
31-8. Sources of equipments
31-9. Various types of construction equipments
31-10. Excavating equipments
31-11. Earth compaction equipments
31-12. Hauling equipments
31-13. Hoisting equipments
31-14. Conveying equipments
31-15. Pumping equipments
31-16. Concrete construction equipments
31-17. Drilling equipments
31-18. Road making equipments
Questions 31

Chapter 32 CPM AND PERT
32-1. General
32-2. Network analysis
32-3. Features of network planning
32-4. Rules for network diagram
32-5. Procedure for CPM
32-6. Advantages of CPM
32-7. Uses of CPM
32-8. Application of CPM in project management
32-9. CPM for determining extension of time
32-10. Difficulties in implementation of the CPM
32-11. Project cost
32-12. Cost-time optimization
32-13. Cost slope
32-14. Optimization by crashing
32-15. Updating an arrow diagram
32-16. Time–grid diagram method
32-17. Programme Evaluation and Review Technique (PERT)
32-18. Terminology Used in PERT
32-19. Percentage of probability
32-20. Implementing PERT
32-21. PERT network scheduling
32-22. Slacks of events
32-23. Negative slack & negative float
32-24. Selection of technique
32-25. Bar charts or Gantt charts
32-26. Mile-stone charts
32-27. Resources planning
32-28. Resource allocation
32-29. Resource levelling
Questions 32

BIBLIOGRAPHY

Index