

CONSTRUCTION MATERIALS

COURSE OBJECTIVES:

Students will have

- To study the physical properties of construction materials which include Rocks, Stones, B r i c k s , Lime, Pozzolanas, Cement, Ceramic Products, Timber
- To study the uses of construction materials which include Mortar, Concrete, Glass, Metals and alloys, Plastics, Fiber reinforced plastics, Glass reinforced plastics.
- To study about foundations, masonry structures, partitions and proofing materials
- To study about floors, d o o r s , Hollow Block and Ferro Cement Constructions Stairs, Floors and flooring, Roof, Weathering course, Introduction to prefabricated elements.
- To study about Pointing, Plastering, finishes, Paints and Varnishes, on wood product washing, distempering on Plastic products washing, distempering, Termite proofing, Scaffolding, Shoring, underpinning and Form work

COURSE OUTCOMES:

Students will get ability

- Describe the physical properties of construction materials.
- Explain the usage of construction materials.
- Describe construction practices of masonry, water proofing and foundation works.
- Describe about doors, windows, ventilators, floors, stairs, roofs etc. and prefabricated elements.
- Describe about finishing works, scaffolding, shoring, under pinning and form work

SYLLABUS

UNIT I

Physical Properties of Materials, Rocks and Stones, Lime and Pozzolanas, Cement, Ceramic Products, Timber and Timber Products.

UNIT II

Mortar, Concrete, Glass, Metals and alloys, Plastics, Fiber Reinforced Plastics, Glass reinforced plastics.

UNIT III

Foundation, Stone Masonry, Brick Masonry, Water Proofing and Damp Proofing material, Advanced water proofing systems – Types of Partitions walls, Load bearing walls.

UNIT IV

Doors, Windows and ventilators, Hollow Block and Ferro Cement Constructions, Stairs, Floors and flooring, Roof, Weathering course, Introduction to prefabricated elements.

UNIT V

Pointing, Plastering, External and Internal Finishes, Paints and Varnishes, White washing, Color washing and distempering, Termite proofing, Scaffolding, Shoring and under pinning, Form work.

TEXT BOOKS

1. P.C.Varghese, “Building Materials”, Prentice-Hall of India (P) Ltd., .
2. S.K.Duggal, “Building Materials”, New Age International (P) Ltd.
3. S.C.Rangwala, “Building Materials”, Charotar Publishing House,.

REFERENCES

1. Dr. B.C. Punmia, “Building Construction”, Laxmi publications (p)Ltd New Delhi.
2. Ashok kumar Jain, “Building Construction”, Laxmi publications (p)Ltd Chennai.
3. IS2185 Part I & IIPWD & CPWD Specifications