

## Trades Details Summary

Trade Name	Description	Duration (Days)
<b>Concreting</b>	<b>To give Technical Training in Concreting</b>	<b>18</b>

### Theory (Concreting)

Topic	Keylearning Outcomes	Equipment Required	Duration
Equipment safety & knowledge about PPEs	What is safety. Awareness about general safety, equipment safety, Use of PPEs, Hand gloves, safety Goggles, Apron, Earplugs, Advantages of safety, Do's & Don'ts	Presentations, Trainer's Guide	2:0
Production of concrete	Proportioning, mixing, type of batch mixers, mixing time, transportation, compaction, curing etc. Quality control in concreting work	Presentations, Trainer's Guide	2:0
Registration of Participants	Self-declaration of covid-19 measures, guidelines, Participant's profile	White Board	2:0
Introduction to Concrete	Concrete-It's designation, grades of concrete, Different types of concrete-PCC,RCC,PSC etc.	Presentations, Trainer's Guide	2:0
Ingredients of Concrete	Ingredients of concrete CEMENT, SAND, AGGREGATE, ADMIXTURE & WATER	Presentations, Trainer's Guide	2:0
IS code IS-456-2000 for plain and reinforced concrete	Understanding of IS code IS-456-2000	Presentations	2:0
Concrete Mix design and Acceptance criteria of concrete	Concrete Mix design-as per IS-10262 and acceptance criteria	Presentations, Trainer's Guide	2:0
Water cement ratio and Workability of concrete	Factors affecting workability, measurement of workability, water cement ratio & strength of concrete.	Presentations, Trainer's Guide	1:0
Mix proportion	Mix proportion, Nominal mix concrete, Design mix concrete.	Presentations, Trainer's Guide	1:0
Properties of concrete	Increase of strength with age, tensile strength of concrete, shrinkage, creep etc.	Presentations, trainer's guide	1:0
Durability of concrete	Mechanism of Corrosion, Process of change in pH value, Process of Carbonation, Permeability Test, Good Construction Practices	Presentations, Trainer's Guide	2:0
Reinforcement & its detailing	Reinforcement, bar bending schedule, cover to reinforcement	Presentations, Trainer's Guide	1:0
Doubt clearing	Feed Back, Group discussion	Presentations, White Board	2:0
Valedictory	Work Ethics, personal financial Planning, Health.	Presentations, white board	2:0
Effective Communication	Subordinates, Peers, Superiors, Customers	Audio-Video	5:0
First Aid	Electrocution, cut, Bleeding, Faint, Bandage, Resuscitation, ambulance.	Audio-Video	4:0
Material handling	Handling of concrete making materials, checking of its quality and quantity	Presentations, trainer's guide	3:0
Orientation Programme & Introduction about Entrepreneurship	Entrepreneur, Entrepreneurship and Enterprise • Scheme & Types of Entrepreneurship • Importance of Entrepreneurship • Entrepreneurship Opportunities & Challenges • Startup Business • Cash Flow * Incubation Centre like DIC & IIT (BHU)	PPT, White Board	2:0
Financial Management	*Financial Management • Resources / Fund availability by Bank • Loan Scheme like Mudra Loan	PPT, White Board	2:0

### Practical (Concreting)

Topic	Keylearning Outcomes	Equipment Required	Duration
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Production of concrete sleeper	Visits to Concrete sleeper plant production unit for learning production process, concrete making	NA	12:0
Laboratory and Model room study	Familiar with different laboratory testing equipment, Testing of compressive strength of concrete	Material	12:0
Laboratory testing	Visits to Concrete sleeper plant laboratory for learning of testing of concrete making ingredients.	NA	12:0
Execution of concrete work and its quality control	Visits to local construction site for learning of execution and quality control of concreting.	NA	12:0
Railway bridge	Visits to railway concrete bridge site for learning of its construction.	NA	12:0

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