

Construction supervision (Civil) COURSE – PCP & PRACTICAL TRAINING SCHEDULE

Total course duration (400 hr)			
PCP (200 hrs)		Self learning (200 hrs)	
Theory (80 hrs)	Practical (120 hrs)		

Week	schedule		PCP topic				Instruction to instructor	Learning outcome
	Topic	Day	Dur atio n (Hr)	Theory	Dur atio n (Hr)	Practical		After attending the PCP learner would be able to-:
Week 1	Introduct ion	Day 1	2 hrs	<ul style="list-style-type: none"> • Introduction to job role. • Roles & responsibilities • Nomenclatures 	3 hrs	<ul style="list-style-type: none"> • Demonstration of job role. • Prepare nomenclature chart. 	<ul style="list-style-type: none"> • Use ppt/videos showing construction supervisor job role & Career progression 	<ul style="list-style-type: none"> • Identify the scope of a construction supervisor. • Identify the roles & responsibilities of the job. • Interpret various abbreviations used in the construction operation.
	Unit and measure ments	Day 2	2 hrs	<ul style="list-style-type: none"> • Units and measurement. • Measurement for different type of construction 	3 hrs	<ul style="list-style-type: none"> • To measure the area, parameter, volume, quantity of 	<ul style="list-style-type: none"> • Provide construction site material and demonstrate 	<ul style="list-style-type: none"> • Identify the units used for measurement. • Carry out the conversion of measuring unit.

				<p>work.</p> <ul style="list-style-type: none"> • Definition of different parts of building. • Formula for determining area & volume. 		<p>some construction site work and material.</p>	<p>how to measure the mentioned parameters.</p>	<ul style="list-style-type: none"> • Measure area, parameter, volume, required in construction work.
Week 2	Introduction to drawing (Plan/Map)	Day 1	3 hrs	<ul style="list-style-type: none"> • Building drawings. • Detailed plan. 	3 hrs	<ul style="list-style-type: none"> • Draw a plane, first view and side view of any 2 room office building including foundation and terrace. 	<ul style="list-style-type: none"> • Demonstrate how to draw and assign the activity to draw. 	<ul style="list-style-type: none"> • Identify the building drawings. • Interpret the detailed building plan drawing.
	Introduction to drawing (important parts of building drawing)	Day 2	3 hrs	<ul style="list-style-type: none"> • Types of drawings. • Scale of map 	3 hrs			<ul style="list-style-type: none"> • Differentiate between various drawings. • Draw the table of scale of drawing.
Week 3	Surveying (aims & apparatus used)	Day 1	2hrs	<ul style="list-style-type: none"> • Define surveying. • Apparatus used. • Types of surveying. 	3 hrs	<ul style="list-style-type: none"> • Inspect all construction equipment & survey equipment 	<ul style="list-style-type: none"> • Trainee should identify and list out the use of all equipment 	<ul style="list-style-type: none"> • Define the purpose of surveying. • Identify & use the apparatus for surveying.
	Surveying (measurement method)	Day 2	2 hrs	<ul style="list-style-type: none"> • Preparation of map of land piece. • Calculation of area. • Layout of building plan 	3 hrs	<ul style="list-style-type: none"> • Measured the interior angle and length of a closed traversed by using chain and prismatic 	<ul style="list-style-type: none"> • Demonstrate the measurement method and practice the measurement and record the 	<ul style="list-style-type: none"> • Prepare the map of land piece. • Calculate the area. • Layout of building plan. • Calculate the land area.

				<p>plan on the map.</p> <ul style="list-style-type: none"> • Calculation of land area 		compass.	values.	
Week 4	Introduction to construction work (equipments)	Day 1	2 hrs		3 hrs	<ul style="list-style-type: none"> • Identify the equipments used in construction work 	<ul style="list-style-type: none"> • Show all the equipments (use Ppt/videos) and demonstrate their use 	<ul style="list-style-type: none"> • identify various equipments used for construction work. • Categorise the equipments according to their operation . • Handle the equipments properly.
	Introduction to construction work	Day 2	2 hrs	<ul style="list-style-type: none"> • type of construction 	3 hrs	<ul style="list-style-type: none"> • Understanding of type of construction 	<ul style="list-style-type: none"> • Demonstrate by using videos or Ppts or arrange site visit for all types of construction work. 	<ul style="list-style-type: none"> • Identify different type of construction. • Identify the important elements of the different construction work.
Week 5	Introduction to construction work	Day 1	2 hrs	<ul style="list-style-type: none"> • super structure 	4hrs	<ul style="list-style-type: none"> • Procedure of layout of orientation of a building. • Perform practical for laying the orientation of the building . 	<ul style="list-style-type: none"> • Visit on a site to see and understand the Procedure of layout of centre line, orientation of a building. 	<ul style="list-style-type: none"> • Adopt appropriate procedure for laying the foundation of building. • Carry out construction work for foundation of the building. • Use super structure while using foundation.
	Introduction to	Day 2	2 hrs	<ul style="list-style-type: none"> • foundation 	4 hrs	<ul style="list-style-type: none"> • Procedure of layout of centre 		

	construction work					line of a building. <ul style="list-style-type: none"> Perform practical for laying centre line of a building. 		
Week 6	Prevention of building from termite & dampness	Day 1	2 hrs	<ul style="list-style-type: none"> Termite prevention. Dampness prevention. 	4 hrs	<ul style="list-style-type: none"> Calculate the area of floor required for termite treatment and measure the required quantity of termite. Application of DPC in cohesive soil 	<ul style="list-style-type: none"> Assign activity to trainee for different areas of floor and compare result. Demonstrate to apply DPC. 	<ul style="list-style-type: none"> Adopt appropriate method to prevent seepage of water in the building. Carry out dampness treatment for building. Carry out termite preventive treatment for a building.
	Security arrangements	Day 2	2hrs	<ul style="list-style-type: none"> Security signs. use of material. 	3 hrs	<ul style="list-style-type: none"> Identify security warning signs and their indication. Identify security wire mesh & guard e.t.c 	<ul style="list-style-type: none"> Show all types of security warning signs. Show all types of wire mesh & guard and demonstrate their use. 	<ul style="list-style-type: none"> Identify different security signs. Use different safety arrangements while working on site.
Week 7	Building material (type of material)	Day 1	2 hrs	<ul style="list-style-type: none"> Building materials. Quality of building material. 	3 hrs	<ul style="list-style-type: none"> Identify and list the properties of building materials used in 	<ul style="list-style-type: none"> Arrange samples of building material 	<ul style="list-style-type: none"> Identify the various building material required in construction works.

				<ul style="list-style-type: none"> • Different type of building materials. 		<p>construction work</p>		<ul style="list-style-type: none"> • identify the grades and quality of building materials.
	Building material (storage of material)	Day 2	2hrs	<ul style="list-style-type: none"> • Handling building materials. • Storage of building materials. 	3 hrs	<ul style="list-style-type: none"> • Procedure for storage of cement 	<ul style="list-style-type: none"> • Demonstrate Procedure for storage of cement by using PPTs /videos. 	<ul style="list-style-type: none"> • Adopt appropriate procedure for storing and handling of building materials.
Week 8	Brick work	Day 1	2 hrs	<ul style="list-style-type: none"> • Method of making mortar. 	3 hrs	<ul style="list-style-type: none"> • Carry out site test of brick and prepare a report for its quality 	<ul style="list-style-type: none"> • Arrange for the site visit, see the individual reports of trainees and have discussion. 	<ul style="list-style-type: none"> • Adopt appropriate procedure for performing brick work. • Identify the different grades of brick.
	Brick work	Day 2	2hrs	<ul style="list-style-type: none"> • Types of bond • Types of Arch • Plinth beam. 	4 hrs	<ul style="list-style-type: none"> • Carry out site visit for making English bond in brick masonry, list out the defects in masonry. 	<ul style="list-style-type: none"> • Demonstrate through video and or PPTs. 	<ul style="list-style-type: none"> • Identify & make different types of bonds use in brick work. • Carry out the brick work with proper tools & equipments. • Cast the beam at plinth level. •
Week 10	Ordinary cement concrete	Day 1	2 hrs	<ul style="list-style-type: none"> • Preparation of concrete. • Concrete mixing machine. • Construction joint. 	4 hrs	<ul style="list-style-type: none"> • Prepare concrete mixture. • Visit at site for identification of cement mixing 	<ul style="list-style-type: none"> • Carry out field test of cement and list out its outcomes. 	<ul style="list-style-type: none"> • Prepare concrete cement mix using appropriate mix ratio. • Adopt appropriate procedure for mixing of concrete.

				<ul style="list-style-type: none"> • Curing • Pouring of concrete. 		<ul style="list-style-type: none"> • machine. • conduct field test of cement and list its outcomes. 		<ul style="list-style-type: none"> • Carry out casting of concrete while taking proper precautions. • Carry out concrete curing at proper period. • Test the concrete to check the consistency.
	Reinforced cement concrete	Day 2	2hrs	<ul style="list-style-type: none"> • Steps for placing RCC. • Method to tie reinforcement. • Reason and remedial measures for corrosion 	4 hrs	<ul style="list-style-type: none"> • Determine workability of concrete mix by slump test. • Identify where RCC cover is required. • Practical for tying up the reinforcement. 	<ul style="list-style-type: none"> • Demonstrate the steps of placing RCC using video/ppts. • Carry out slump test. 	<ul style="list-style-type: none"> • Identify the need of RCC cover. • tie up the reinforcement while following proper precautions. • Identify the reason for corrosion and take appropriate remedial measures.
Week 11	Reinforced cement concrete	Day 1	2 hrs	<ul style="list-style-type: none"> • Shuttering for slab. • Form work for column • concreting 	4 hrs	<ul style="list-style-type: none"> • Draw a one way and two way pattern of reinforcement in a RCC slab. • Practice for placing concrete. 	<ul style="list-style-type: none"> • Assign the activity of drawing the pattern and carry on group discussion for doubt clearing. 	<ul style="list-style-type: none"> • Prepare form work for construction of RCC structure. • Placed reinforced concrete. • remove form work used in RCC structure.
	Roof	Day 2	2hrs	<ul style="list-style-type: none"> • Importance of roof. • Various types of 	4 hrs	<ul style="list-style-type: none"> • Prepare a model for any type of 	<ul style="list-style-type: none"> • Arrange the group activity 	<ul style="list-style-type: none"> • Identify various types of roof construction.

				<p>roof.</p> <ul style="list-style-type: none"> • Construction activities of roof. • Precautions taken during construction. 		<p>roof truss and covering material .</p>	<p>for preparing the model.</p>	<ul style="list-style-type: none"> • Identify the materials required in various types of roof construction. • Carry out different types of roof construction while taking appropriate precautions (like check for water drain).
WEE K 12	Plastering , painting and polishing (plastering procedure)	Day 1	2 hrs	<ul style="list-style-type: none"> • Importance and where plastering required. • Types of plaster. • Precautions taken during plastering. 	4 hrs	<ul style="list-style-type: none"> • Calculate the consumption of cement in 20mm thick (1:4) single coat cement plaster for exterior of 10'x 20'x2 rooms. 	<ul style="list-style-type: none"> • Make arrangements for the particular practical. 	<ul style="list-style-type: none"> • Estimate the cement quantity according to thickness of plaster. • Identify the type and quantity of materials required for plastering. • Carry out cement plastering while adopting proper precautions.
	Plastering , painting and polishing (Types of Plaster & precautions)	Day 2	2hrs	<ul style="list-style-type: none"> • Importance of painting and polishing. • Materials used. • Process and precautions. 	4 hrs	<ul style="list-style-type: none"> • Perform distempering and observe the consistency and finishing. • Practice painting on different surface • Practice for 	<ul style="list-style-type: none"> • Assign any one type of distempering in groups and observe the result. 	<ul style="list-style-type: none"> • Identify the material used in painting. • Estimate the quantity of material required for painting a particular dimension. • Prepare the surface for painting. • Carry out painting

						polishing of wood.		effectively while adopting proper precautions. <ul style="list-style-type: none"> • Handle brush and painting machine and carry out its maintenance. • Identify & use the polishing material for wood polishing.
Week 13	Flooring (Types)	Day 1	2 hrs	<ul style="list-style-type: none"> • Precaution before flooring. • Types of flooring. • Material used • Different process of flooring. 	4 hrs	<ul style="list-style-type: none"> • Important precaution before laying flooring • To measure the floor area for calculating the floor material required 	<ul style="list-style-type: none"> • Use Ppt or videos. • Assign to practice the calculation on 2-3 different floor area. 	<ul style="list-style-type: none"> • Identify the types of flooring. • Identify and estimate the material required for flooring. • Differentiate among different process of flooring.
	Flooring (Method of laying)	Day 2	2hrs	Process of-: <ul style="list-style-type: none"> • cement concrete flooring. • Ready made marble tiles flooring. • Gazed tile • Stone flooring • Wooden flooring 	4 hrs	<ul style="list-style-type: none"> • Procedure for laying flooring. • Practice for laying flooring, use of equipment and machinery. 	<ul style="list-style-type: none"> • Demonstrate the procedure for laying different flooring. 	<ul style="list-style-type: none"> • Carry out the task of laying different type of flooring while adopting appropriate precautions and use appropriate tools and machinery.
Week 14	Construction of drains/se	Day 1	2hrs	<ul style="list-style-type: none"> • Importance of drain and sewer construction. 	4 hrs	<ul style="list-style-type: none"> • To understand the difference between drain 	<ul style="list-style-type: none"> • Use pictures / ppts or videos 	<ul style="list-style-type: none"> • Differentiate between drains & sewer. • Identify the important

	wers(Importance)			<ul style="list-style-type: none"> • Construction feature of drain & sewer. • Manholes & its application. 		<ul style="list-style-type: none"> • Demonstration of the construction process of drain & sewer. 		<ul style="list-style-type: none"> • construction features of drain & sewer. • Identify material of pipe used in sewer lines. • Identify location of manholes.
	Construction of drains/sewers (process)	Day 2	2hrs	<ul style="list-style-type: none"> • Process of construction of drain & sewer. • Various parts of pipe. • Sanitary installations 	4 hrs	<ul style="list-style-type: none"> • To establish invert level for a sewer line from building to last manhole. • Demonstrate the process of giving specific slope, while constructing drains and sewer 	<ul style="list-style-type: none"> • Practice to establish the invert level 	<ul style="list-style-type: none"> • Carry out the digging of trench and provide specific slope for construction of drain or sewers. • Undertake the process of joining the pipe for manhole. • Identify different sanitary fitting and make their connections with drains.
Week 15	Road work (types & related activities)	Day 1	2 hrs	<ul style="list-style-type: none"> • Various types of roads. • Construction features. • Material used. 	4 hrs	<ul style="list-style-type: none"> • Visit any road construction site and list all work activity 	<ul style="list-style-type: none"> • Arrange for the construction site visit and carry out discussion on the observed activity at site. 	<ul style="list-style-type: none"> • Identify the levels of the roads. • Differentiate by observation various types of road. • Sketch the typical cross section of the road. • Identify the materials used in road construction.
	Road work	Day 2	2 hrs	<ul style="list-style-type: none"> • Preparation of sub grade. 	4 hrs	<ul style="list-style-type: none"> • preparing premix 	<ul style="list-style-type: none"> • Demonstrate the 	<ul style="list-style-type: none"> • Differentiate among

	(preparation process)			<ul style="list-style-type: none"> • Preparing premix in bitumen road. • Cement concrete road. 		<ul style="list-style-type: none"> • in the bitumen road. • Visit road construction site to observe the machinery and equipment used. 	<ul style="list-style-type: none"> • process through actual site visit or use videos. 	<ul style="list-style-type: none"> • various process of road construction. • Prepare premix in bitumen road. • Lay concrete for construction of cement concrete road while adopting appropriate precautions.
Week 16	Safety Precautions	Day 1	3 hrs	<ul style="list-style-type: none"> • Safety gadgets. • First-aid box. • Treatments done in case of injury. 	3 hrs	<ul style="list-style-type: none"> • Identification of different types of safety gadgets by observation. • first aid treatment in exigency, use different first aid materials for trauma injuries & general bleeding, bone fractures e.t.c 	<ul style="list-style-type: none"> • Make trainee practice the mock drills for safety of self and co-workers. • Demonstrate first aid treatment in exigency (using dummy situations). 	<ul style="list-style-type: none"> • Identify & use various safety gadgets. • Identify the components of first aid box. • Prevent wastage of raw materials used at construction site. • Provide required first aid in case of injury at work place. • Carry out safety of self , co-workers and project.
	Hazards at worksite and its precaution	Day 2	3 hrs	<ul style="list-style-type: none"> • Air-borne and water borne disease at construction work site. 	3 hrs	<ul style="list-style-type: none"> • Learning the prevention of spreading of air-borne and water borne diseases at 	<ul style="list-style-type: none"> • Practice evacuation Plans and procedures during accidents. • Demonstrate using videos 	<ul style="list-style-type: none"> • Identify the work site hazards. • Identify & use sign boards and barricades at work site. • Carry out recycling of

				<ul style="list-style-type: none"> • Evacuation plans & procedure. • Safety norms & colors. • Use of sign boards & barricades. 		<ul style="list-style-type: none"> • Learning of safety norms & colors 	<ul style="list-style-type: none"> • recycling of materials used i. • Practicing the use of proper sign boards and barricade system • Demonstrate using videos safety norms & colors. 	<ul style="list-style-type: none"> • Use proper evacuation plans in case of hazard at work site.
Week 17	Reporting	Day 1	3 hrs	<ul style="list-style-type: none"> • Importance of reporting. • Elements of effective reporting to senior. • Case study 	2 hrs	<ul style="list-style-type: none"> • Project report for planning & execution of work 	<ul style="list-style-type: none"> • Prepare a team of trainees for different role for a common project and submit project report for planning & execution of work. 	<ul style="list-style-type: none"> • Identify important elements of a construction project and record on paper the plan of construction. • Execute the construction task in a team.
	Communication in team	Day 2	3 hrs	<ul style="list-style-type: none"> • Work ethics. • Working in a team. • Elements of work place communication. • Case study 	2 hrs	<ul style="list-style-type: none"> • Execution of task in a team. 	<ul style="list-style-type: none"> • Practice Methods of communication and interactions (oral, written & body language) by organizing a group discussion. 	<ul style="list-style-type: none"> • Execute task in a team by following proper communication ethics.

Week 18	Work Planning and organization	Day 1	3 hrs	<ul style="list-style-type: none"> • Sequence of construction work. • Assigning work. • Case study 	2 hrs	<ul style="list-style-type: none"> • Site work for planning & preparation. 	<ul style="list-style-type: none"> • Organize a group discussion activity for a site work for planning & preparation. 	<ul style="list-style-type: none"> • Estimate the amount of material required for the assigned project. • Estimate the cost of the project in terms of man power, time and material required.
	Quantity and quality assurance of work	Day 2	3 hrs	<ul style="list-style-type: none"> • Various test for checking the quality of materials used. • Case study 	2 hrs	<ul style="list-style-type: none"> • Guidelines for quality in work, control of wastage and damage. • & Steps of workflow 	<ul style="list-style-type: none"> • Assign Preparation of a maintenance manual by taking a situation from site work. 	<ul style="list-style-type: none"> • Ensure the quality of materials used during various type of construction work. • Ensure the customer satisfaction after completing the project. • Test the construction project before opening for use.