

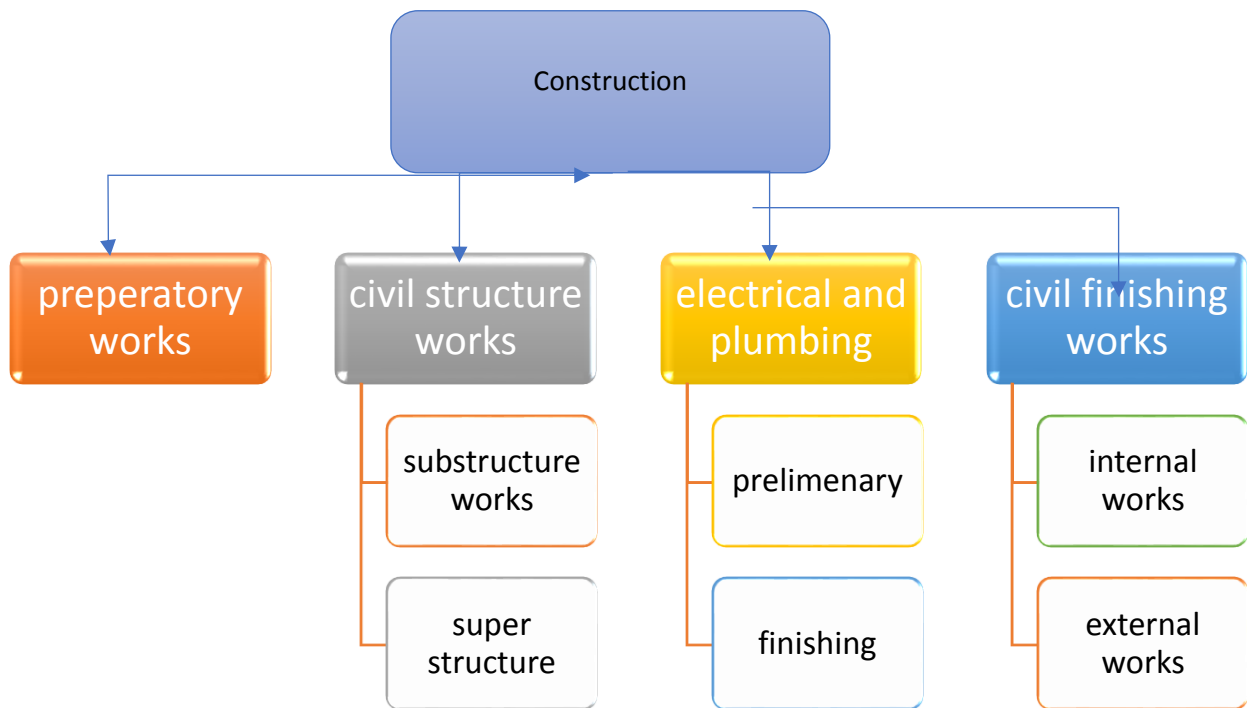
Subject: construction management

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Ans(1)(a):

As we are hired in the construction phase so our WBS and activity will be in construction phase



Now we will make activity list for this

WBS LEVELS	Activity
construction	
Preparatory works	
	Site clearance
	Site layout
Civil structure works	
substructure	
	excavation
	foundation
	dpc
superstructure	
	ground floor beams and columns
	Ground floor slab plus curing
	First floor beams and columns
	First floor slab
	Ground floor brick work
	First floor brick work/walls
	OHWT
Electrical and plumbing	
Preliminary	
	Rough electrical
	Rough plumbing
finishing	
	Electrical finishing

	Plumbing fixtures
Civil finishing works	
Internal works	
	Door/windows frames
	flooring
	paint
External works	
	Door/window frames
	flooring
	paint

Ans(1)(b)

Now we will add timeline to above activity table

WBS LEVELS	Activity	time
construction		
Preparatory works		
	Site clearance	7 days
	Site layout	6 days
Civil structure works		
substructure		
	excavation	13 days

	foundation	13 days
	dpc	4
superstructure		
	ground floor beams and columns	15
	Ground floor slab plus curing	20
	First floor beams and columns	15
	First floor slab	18
	Ground floor brick work	8
	First floor brick work/walls	8
	OHWT	21
Electrical and plumbing		
Preliminary		
	Rough electrical	11
	Rough plumbing	11
finishing		
	Electrical finishing	12
	Plumbing fixtures	12
Civil finishing works		
Internal works		
	Door/windows frames/finishing	13
	flooring	27
	paint	20
External works		
	Door/window frames	7

	flooring	10
	paint	8

Ans(1)(c)

CRITICAL Path: so, the combination of successive activities that can not be delayed and have zero float are called critical path

So, from the above activity list we will pick the activities which lie on the critical path

- Excavation
- Foundation
- Ground floor beams and columns
- Ground floor slab
- First floor beams and columns
- Electrical fittings
- Plumbing fixtures

Ans(1)(d):

To sum up all the activities the time taken by the project is 279 working days= 46.5 weeks

But there can be float or delay of some activities due to weather or some national holidays, so we increase the days to 310 working days= 51.6 (excluding Friday).

Ans(1)(e):

SLACK TIME: this is the amount of time in which an activity can be delayed such that the whole project isn't

Delayed, so from above activity list we will identify activities with slack time.

- First floor slab up to 3 to 4 days due to shuttering problems/rain fall
- Exterior paint delays up to 3 to 4 days due to rain fall
- Exterior doors like main gate fixing delay up to 2 to 3 days

THE END