

Subject Teacher : Shishir Kumar Ghosh
Subject Name : Construction process-1
Subject Code : 26433
Technology : Civil
Semester : 3rd
Reference Book : construction process-1 (R.S)

Marks	Grade Point	Letter Grade	Marks	Grade Point	Letter Grade
80>	4.00	A+	55-59	2.75	B-
75-79	3.75	A	50-54	2.50	C+
70-74	3.50	A-	45-49	2.25	C
65-69	3.25	B+	40-44	2.00	D
60-64	3.00	B	0-39	0.00	F

Mark Distribution (for 150 Marks)			
Theory Marks		Practical Marks	
Midterm	20	PC	25
Class test	10	PF	25
Quiz test	10	-	-
Final	60	-	-
Total	100	Total	50

Subject Aim

1. Explain construction Health and safety.
2. Explain different types of Hand tools, power tools and Equipment.
3. Explain different types of Concrete and its properties, strength durability and Workability.
4. Explain the proportioning, mixing, transporting, placing and curing procedure of Concrete.
5. Explain method of preparation of cement concrete and special types of concrete.
6. Describe the classification of brick masonry and Bond.
7. Describe the procedure of block masonry, composite masonry.
8. Describe the different types of partition wall and drywall.

Class Time Distribution (90 Minutes)	
Follow up absent students	5
Previous class review	10
Present class topic discussion	60
Present class topic review	10
Next class topic	5
Total	90

SHORT DESCRIPTION

Construction process-I is the pre-requisite of Construction process-II. Civil Engineering diploma graduates have to supervise construction of various project works involving use of various construction work based on quality. It does have physical parts with which we can make an appropriate shelter, service for the client to use it. So, to know how to build a construction project, one must know about Concrete, its types, properties, use of concrete, brick masonry, block masonry, different type of partition wall, drywall etc. This set of knowledge and skill to gives confidence to understand and construct a project. The students should have requisite knowledge regarding characteristics, uses and availability of various building item of work for construction purposes. In addition, specifications of various materials should also be known (BNBC/PWD) for effective quality control

THEORY				
Lecture	Chapter	Supporting Equipment	Topic	Benefits
01	CONSTRUCTION HEALTH AND SAFETY	Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=LiPNyWyCTU	1.1 Define personal health and safety. 1.2 Define Personal Protective Equipment. 1.3 List the PPE for Construction Work. Place.	Get real knowledge about health and safety
02		Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=LiPNyWyCTU	1.4 List the color code practice of Helmet in construction Project. 1.5 List the color code practice of High visible vest in construction Project. 1.6 Explain the procedure to maintain safety in work	Get real knowledge about helmet in construction project
03	CONSTRUCTION TOOLS AND EQUIPMENT'S	Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=WwT4HxjulsY	2.1 Define tools and Equipment. 2.2 List the tools used in construction work. 2.3 List the Equipment for Construction work. 2.4 Explain the procedure to use hand tools and Power tools.	
04		Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=WwT4HxjulsY	2.5 Explain the procedure to use Equipment. 2.6 Explain the maintaining procedure of Tools and Equipment. 2.7 Explain the Re-store procedure of Tools and Equipment	Get real knowledge about CONSTRUCTION TOOLS AND EQUIPMENT'S
05	Practical class			
06	FEATURES AND PROPERTIES OF CONCRETE	Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=pNs2QjeYp44	3.1 Define concrete. 3.2 Mention the different Types of concrete. 3.3 List the uses of concrete in construction. 3.4 List the function of ingredients for concrete. 3.5 Mention the advantages and limitations of concrete. 3.6 Point out the characteristics of materials used in concrete. 3.7 Define strength, durability, workability, laitance and segregation	Get real knowledge about FEATURES AND PROPERTIES OF CONCRETE

07		Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=pNs2QjeYp44	3.8 List the factors affecting the strength, durability and workability of concrete. 3.9 Define water-cement ratio. 3.10 Describe the effect of water-cement ratio on the strength of concrete	Get real knowledge about FEATURES AND PROPERTIES OF CONCRETE
08	PROPORTIONING, MIXING, TRANSPORTING, PLACING AND COMPACTION AND CURING OF CONCRETE.	Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=8o9imdshjJ0	4.1 Explain the significance of proportioning the ingredients of concrete. 4.2 List the methods of concrete mix design. 4.3 Describe batching of concrete mix design by volume and weight. 4.4 Describe the ready-mix concrete. 4.6 Mention the advantages and limitations of ready-mix concrete.	Get real knowledge about Get real knowledge about PROPORTIONING, MIXING, TRANSPORTING, PLACING AND COMPACTION AND CURING OF CONCRETE
09		Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=8o9imdshjJ0	4.7 State the various methods of transporting concrete. 4.8 Mention the sequence of placing concrete in different situations. 4.9 Explain curing and methods of curing. 4.10 Mention the advantages and limitations of various methods of curing	Get real knowledge about Get real knowledge about PROPORTIONING, MIXING, TRANSPORTING, PLACING AND COMPACTION AND CURING OF CONCRETE
10	Practical class			
11	SPECIAL CONCRETE.	Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=g4T0ozM4YMO	5.1 List the special types of concrete. 5.2 Compare between polymer concrete and super plasticized concrete. 5.3 Mention the procedure used in the production of Ferro-cement construction	Get real knowledge about SPECIAL CONCRETE.
12			5.4 Explain pre-stressed concrete. 5.5 Mention the procedure used in production of pre-stressed concrete. 5.6 Explain the procedure of fair face Concrete.	Get real knowledge about
13	CONCRETE CONSTRUCTION AND SUPERVISION	Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=q2JsYyBOTel	6.1 Define precaution and supervision of concrete construction. 6.2 List the special precautions to be observed for concreting under water. 6.3 List the special precautions to be observed for concreting in cold weather. 6.4 Mention the special precautions to be observed for concreting in hot weather. 6.5 List the factors to be considered while	Get real knowledge about CONCRETE CONSTRUCTION AND SUPERVISION

			supervising good quality	
14		Basic Class Materials ● Projector ● Laptop or Desktop, Projector,Etc Link - https://www.youtube.com/watch?v=q2JsyYB0TeI	6.6 Explain the factors to be considered while supervising good quality RCC construction. 6.7 Explain the factors to be considered while supervising good quality pre-stressed concrete construction.	Get real knowledge about CONCRETE CONSTRUCTION AND SUPERVISION
15	Practical class			
16	Class test			
17	BRICK MASONRY	Basic Class Materials ● Projector ● Laptop or Desktop, Projector,Etc Link - https://www.youtube.com/watch?v=iyLCRO5MOWk	7.1 Define brick masonry. 7.2 Explain bond. 7.3 Define header, stretcher, course, bed, joint and closer. 7.4 Define bond in brick masonry 7.5 Sketch Header, stretcher, English, Flemish, Garden wall and Rat trap bond	Get real knowledge about BRICK MASONRY
18		Basic Class Materials ● Projector ● Laptop or Desktop, Projector,Etc Link - https://www.youtube.com/watch?v=iyLCRO5MOWk	7.6 Mention the functions of good brick bonding. 7.7 Mention different types of bonds in brick masonry. 7.8 Explain the procedure of brick laying. 7.9 List the defects in brick masonry. 7.10 Mention the considering factors of brick masonry works.	Get real knowledge about BRICK MASONRY
19	BLOCKMASONRY	Basic Class Materials ● Projector ● Laptop or Desktop, Projector,Etc Link - https://www.youtube.com/watch?v=lqgJev5GoDc	8.1 Define hollow and solid block. 8.2 Explain the necessity of hollow and solid block. 8.3 Sketch hollow and solid block. 8.4 Mention the feature of hollow and solid block. 8.4 Point out different types of hollow and solid block. 8.5 Mention the advantages and limitations of hollow and solid block. 8.6 Describe the construction procedure of hollow and solid block. 8.7 Mention the precautions of hollow and solid block works.	Get real knowledge about BLOCKMASONRY
20	COMPOSITE MASONRY	Basic Class Materials ● Projector ● Laptop or Desktop, Projector,Etc Link - https://www.youtube.com/watch?v=63uDG001KhQ	9.1 Define composite masonry. 9.2 Mention different types of composite masonry. 9.3 Sketch brick backed stone slab masonry. 9.4 Mention the advantages and limitations of using reinforced brick masonry. 9.5 Define cavity wall. 9.6 Explain the necessity of cavity wall. 9.7 Sketch cavity walls. 9.8 Mention the feature of cavity wall.	Get real knowledge about COMPOSITE MASONRY
21	Practical class			
22	PARTITION WALL	Basic Class Materials ● Projector	10.1 Define partition wall. 10.2 Mention the common requirement of partition	Get real knowledge about

		● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=63uDG001KhQ	wall. 10.3 Mention the functions of partition wall. 10.4 List different types of partition wall.	PARTITION WALL
23	Class test			
24		Basic Class Materials ● Projector ● Laptop or Desktop, Projector, Etc Link - https://www.youtube.com/watch?v=63uDG001KhQ	Partition, Glass partition, Aluminum partition and Light weight partition (timber stud work board) wall. 10.6 Mention the advantages and limitations of different partition wall. 10.7 Differentiate between load bearing (main) wall and partition wall	Get real knowledge about PARTITION WALL
25	Review class			