



FS81 504

DEPARTMENT OF CIVIL ENGINEERING

CE 1204-CONSTRUCTION TECHNIQUES EQUIPMENTS AND PRACTICES

**UNIT – I - CONCRETE TECHNOLOGY
PART – A**

1. List the constituents of cement
2. List the types of cement
3. Define grade of cement with an example
4. List the steps involved in the manufacturing process of cement
5. What are the concrete chemicals available
6. Define workability
7. Define fresh and hardened concrete
8. Define admixture with an example
9. Define weight and volume batching
10. Define formwork
11. Define proportioning of concrete
12. Define curing of concrete
13. Define slump test
14. List the tests to be conducted for fresh concrete.
15. List the tests to be conducted for hardened concrete.

PART – B

16. Draw the flow diagram of manufacturing process of cement by wet process. Explain.
17. Draw the flow diagram of manufacturing process of cement by dry process. Explain.
18. Explain the concrete chemicals and its application
19. Explain the construction chemicals and its application
20. Explain the manufacturing process of concrete
21. Explain the test for fresh concrete
22. Explain the test for hardened concrete
23. List the factors and explain in detail the cracks in concrete
24. Explain the non-destructive testing of concrete
25. Write down the complete procedure of mix design as per BIS.

**UNIT – II - CONSTRUCTION PRACTICES
PART – A**

1. What are the factors comprise job planning.
2. Define technical planning and list the steps.
3. Define site clearance.
4. Define slip forms.
5. Define culvert.
6. List the types of flooring.
7. List the types of formwork.
8. Define expansion joint, contraction joint.
9. Define temporary sheds.
10. Define scaffolding and list the types.
11. Define shoring and list the types.
12. Define fabrication and erection of steel trusses.
13. Define shallow and deep foundation.
14. List the damp proof courses.
15. Define braced domes.

PART – B

1. Explain in detail the following:
 - (i) Job planning
 - (ii) Scheduling
 - (iii) Site clearance
2. Explain the types of scaffolding.
3. Explain the types of shoring.
4. Explain various stone masonry.
5. Explain the various laying of concrete hollow block masonry.
6. Explain the various types of flooring.
7. Explain the various methods of damp proofing.
8. Explain the acoustics principle and fire protection building material property.
9. Explain the joints used in the construction.
10. Enumerate the types of floors and explain the methods employed in water proofing of flat surf.

**UNIT – III - SUB STRUCTURE CONSTRUCTION
PART – A**

1. Define precast concrete piles
2. Define caisson and list the types
3. Define cantilever sheet piling

4. Define wales and tierods
5. Define anchorages
6. Define grouting
7. Define cofferdam
8. List the types of cofferdam
9. Define pile driving
10. List the methods of tunneling
11. Define tunnel drainage
12. Define dewatering
13. Define drill jumbos
14. Define diaphragm walls
15. Define cloverleaf type of cellular cofferdam.

PART – B

16. Explain the techniques involved in the box- jacking and pipe jacking.
17. What are braced coffer dams? Explain different types.
18. Explain the different methods of tunneling.
19. Explain the different types of tunnel lining.
20. Explain the different types of mechanical moles.
21. Explain the various methods of ground water control.
22. Explain the following
 - (i) Vibro compaction
 - (ii) Vibrating probe
 - (iii) Vibro displacement compaction
 - (iv) Vibrofloataton.
23. Explain the underwater construction of diaphragm wall and basement.
24. Explain the various types of cofferdam.
25. Explain the methods of mechanical ventilation.

UNIT – IV - SUPER STRUCTURE CONSTRUCTION PART – A

1. Explain the continuous girder bridge
2. Define steel bridge
3. Define suspension bridge
4. Define bridge decks
5. Define shell structure
6. Define dome
7. Define in-situ prestressed concrete

8. Define termite proofing
9. Define articulated structures
10. What are conveyors, give example
11. What is a skyscraper
12. Name the components of building superstructure
13. Discuss two advantage and disadvantage of tall structure
14. Differentiate between space decks and bridge decks
15. List two equipments used for erecting tall structures

PART – B

16. Explain the various types of bridges.
17. Explain the steel bridges.
18. Explain the various types of bridge decks.
19. What are the various construction techniques of bridge construction?
20. Explain the types of shell structures.
21. Explain the principles of termite proofing and its various methods.
22. Explain about the articulated structure.
23. Explain the reaction of structure.
24. What are the various conveyors?
25. Discuss the erection of shell element.

UNIT – V - CONSTRUCTION EQUIPMENTS PART – A

1. Define operating cost.
2. Define excavators.
3. Define shovels.
4. Define clamshell.
5. Define bulldozers.
6. Define scraper.
7. List the types of scrapers.
8. Define loaders.
9. Define driving hammer.
10. List the classification of driving hammer.
11. Define compaction.
12. Define rollers and list the types of rollers.
13. List the types of compacting equipment.
14. Define aggregate feeders.
15. Define hoists.

PART – B

1. Explain the types of excavators.
2. What are the types of tractors? Explain.
3. Explain the various scrapers.
4. Explain the various hammers.
5. Explain the different types of rollers.
6. Explain the various types of compacting machine.
7. Explain the construction of tall building.
8. Explain the various concreting equipment.
9. Explain the various equipments used in pile driving.
10. What are the types of cranes? Explain.

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