

31071-Advanced Construction Technology

UNIT 1

PART – A (2 MARKS)

1. Define pile foundations?
2. Give any two uses of pile?
3. Write the classification based on materials?
4. What are bearing and friction pile?
5. Write the purpose of sheet pile?
6. Write any two types of sheet pile?
7. What is pile shoe?
8. Define pile driving?
9. Mention any two causes of failure pile?
10. Define admixture?
11. Define guniting (or) shotcrete?
12. List any two causes for loss of prestress?
13. What are the systems of prestressing?
14. Define tendon?

PART – B (3 MARKS)

1. Distinguish between bearing piles and friction piles?
2. List the types of hammer?
3. Write the purpose of non load bearing piles?
4. Write short note on special concrete?
5. What are the methods of curing?
6. Definition of terms used in prestressed concrete?
7. What is need for composite construction?

PART – C (10 MARKS)

1. Describe with neat sketch bearing and friction pile
2. Describe precast concrete pile in details with sketches?
3. How is a pile tested for its load bearing capacity explain it
4. Explain about pile driving and the various equipments required?
5. List out any ten causes of failures of pile
6. Write short notes on freyssinet system of with a neat sketch?
7. Write short notes on magnel blaton system?
8. Write short notes on lee-mc system?
9. Describe fibre reinforced concrete and its production process?
10. Explain in detail about the causes of loss in prestressing force?

31071-Advanced Construction Technology

UNIT 2

PART – A (2 MARKS)

1. What is meant by prefabrication system?
2. What is composite member?
3. Write the value of tolerance on dimensions of (i) length (ii) cross section
4. Define flatness?
5. State the value of basic module?
6. Mention the types of prefabricated building.
7. List the prefabrication methods?
8. Name the various types of mould?
9. List the equipments required for the erection of prefabrication methods?
10. Give the names of cranes used on rails
11. What is a staircase system?

PART – B (3 MARKS)

1. Write short notes on prefabrication?
2. Write short notes on squareness and straightness?
3. What are the requirements of a joint in prefabrication building ?
4. Write short notes on moulding?
5. Give short notes on battery form method?
6. Write short notes on transport of precasting element?

PART – C (10 MARKS)

11. What are the advantage and disadvantages of the prefabrication systems
12. Explain modular co-ordination system ?
13. What are the characteristics to be considered in devising a system
14. List and explain the various stages of precasting concrete products?
15. Discuss about factory and site prefabrication system
16. Explain various processes involved in the manufacture of precast elements?
17. List the items of works to be carried out in the erection site of precast elements
18. Explain the prefabrication building equipment required

31071-Advanced Construction Technology

UNIT 3

PART – A (2 MARKS)

1. Mention the causes of fire?
2. Name any five fire resisting building materials?
3. What is fire escape?
4. What is a strong room?
5. What is exit?
6. Define earthquake?
7. Define epifocus/epicentre
8. Define focus?
9. Define seismic coefficient?
10. Define articulation joints?

PART – B (3 MARKS)

1. What are the causes and effects of fire?
2. Describe alarm system in fire protection?
3. Write short notes on common wall stair & floor
4. Write short notes on articulation joints
5. Write short notes on expansion joints?
6. Write short notes on foundation?
7. Write short notes on construction of framed buildings in earthquake zones

PART – C (10 MARKS)

1. What are the precautionary measures to be taken to minimize the danger of fire?
2. Explain limiting fire spread and mention the factors to be considered.
3. Define fire protection system and explain its types
4. Explain with neat sketch about strong room construction
5. Explain about the seismic forces and effect of seismic force
6. What are the general guidelines for planning of earthquake resistant building?

31071-Advanced Construction Technology

UNIT 4

PART – A (2 MARKS)

1. Why safety aspect is necessary in building demolition?
2. How is safety aspect provided in building demolition?
3. Define catch platform?
4. What is the main purpose of repairs to building?
5. What are the defects found in mosaic terrazzo flooring?
6. State the first stage to be taken in demolishing buildings
7. Explain cracks and what are the types of cracks?
8. What is meant by hair cracks?
9. What are the materials used for filling cracks?
10. What is plate bonding?

PART – B (3 MARKS)

1. What are the major causes for defects in building?
2. Write short notes on demolition of trusses?
3. Write short notes on fixing fan clamps in existing R.C.C slab?
4. Mention the various factors influencing cracks in the building?
5. List the categories of cracks in buildings
6. Draw a sketch showing transverse cracks in sunshade?
7. Write short notes on repair cracks on face plaster?

PART – C (10 MARKS)

1. What are the precautions measures taken during demolition of a building?
2. What is the sequence of demolition of operators?
3. Describe with neat sketch demolition of girders and beams.
4. Define demolition process of R.C.C concrete walls with neat sketch?
5. Explain with sketches horizontal cracks in masonry.
6. Illustrates with sketches, vertical cracks in walls
7. Explain about repair of cracks in masonry wall
8. Write short notes on the material used for filling cracks.

31071-Advanced Construction Technology

UNIT 5

PART – A (2 MARKS)

1. What is meant by BER?
2. What is a landscaping?
3. Define energy saving house
4. What do you understand by zero energy houses?
5. What is the purpose of modernization?
6. What is meant by super insulation?
7. Define escalator or pathway
8. What are the component parts of the escalator?
9. Mention the basic components of the lift
10. What are the main components of lift car

PART – B (3 MARKS)

1. Explain modular kitchen?
2. Explain modular bath room?
3. Write short notes on green house
4. Explain passive house construction?
5. What are independent lifting services?
6. Explain about mechanical modernization?
7. Write short notes on lift car interior?

PART – C (10 MARKS)

1. Explain briefly about housing modernization and management?
2. Write short notes on drafting construction contract?
3. Briefly explain about the term transforming from traditional to modern style
4. Explain about strengthening of old building.
5. Write short notes on quality tested commercial passive house construction
6. Define eco friendly modernization.
7. Explain about escalator.
8. Explain about lift construction.