

Important Question – Unit 4 & 5

Two Mark:

Name one material commonly used for damp-proofing in basements.

What is the role of fire-resistant doors in building safety?

Name two types of air conditioning systems commonly used in commercial buildings

What is the primary function of a bulldozer in construction projects?

State one type of compaction equipment suitable for compacting loose sandy soils.

Define prefabricated panels and mention one advantage of using them in construction

What is cladding, and how does it contribute to building aesthetics?

What is the purpose of cross-ventilation in residential spaces?

What are two factors to consider when selecting construction equipment for a high-rise building project?

Name two types of earthwork equipment commonly used in road construction.

13 Marks

1. Discuss the materials and construction techniques used to design fire-resistant buildings, highlighting safety features and compliance with fire safety codes.
2. Explain the methods and materials used for damp-proofing and waterproofing in construction. Include case examples of areas prone to water ingress and solutions to address these issues.
3. A construction project involves pouring concrete at heights and long distances. Discuss the types of concrete pumping equipment available and how they improve efficiency compared to traditional methods.

4. Discuss the environmental impacts of construction equipment use and propose measures to reduce fuel consumption, emissions, and noise levels in a large infrastructure project.
5. In a site located near a river, groundwater poses a challenge for foundation construction. Propose a dewatering system using pumps and explain how to manage water inflow during construction.
6. Compare the functions and applications of bulldozers, excavators, and scrapers in earthwork. Discuss how to select the right equipment based on soil type and volume of earth to be moved.
7. In designing a modern office building, how would you incorporate effective ventilation and air conditioning systems? Include considerations for energy efficiency and indoor air quality.
8. A residential complex is located near a busy highway. Propose a cladding material to enhance sound insulation and explain its application, advantages, and limitations.
9. In a site located near a river, groundwater poses a challenge for foundation construction. Propose a dewatering system using pumps and explain how to manage water inflow during construction.
10. A contractor is tasked with constructing a large dam. Discuss the factors to consider when selecting construction equipment, including site conditions, equipment versatility, and cost-effectiveness.
11. A housing society with 100 units needs a drainage and sewage treatment plan. Design a system that includes components for storm water drainage, sewage treatment plant layout, and measures for maintaining the system.
12. A construction project involves pouring concrete at heights and long distances. Discuss the types of concrete pumping equipment available and how they improve efficiency compared to traditional methods.