1. **Explain the term lift slab construction?**

   The term lift slab construction is a method of constructing concrete buildings by casting the floor or roof slab on top of the previous slab and then raising (jacking) the slab up width hydraulic jacks, so being cheaper and faster as it does not requires boxing and supports for casting in situ.

2. **Give the classification of wall panels?**

   - Cellular unit
   - Hollow concrete block masonry unit
   - Soil cement block units
   - Flyash brick
   - Lime soil blocks
   - RCC Panels.

3. **What are the test involved in prefabricated components?**

   - Strength test – load test
   - Rebound hammer test
   - Ultrasonic pulse velocity test
   - Pull out test methods.

4. **What are large panel system?**

   The large panel system is referred to multi storey structures composed of large wall and floor concrete panels connected in the vertical and horizontal directions so that the wall panels enclose appropriate spaces for the rooms within the building, these panels form a box like structure.

5. **What is the method of construction components of column?**

   Precast columns can be produced as either multi storey corbelled columns or single floor to floor elements. They may be either prestressed or reinforced. It has been found that the single floor to floor column is the most economical. Single storey reinforced columns are simple to design, detail and construct. Once loads and bending moments are established the design process is the same as standard reinforced insitu column. Eccentric loading due to erection requirement and localized effects at the top and bottom of the column should be taken into account in the design.

6. **What is the method of construction components of column?**

   The precast beam are inverted T- profile and are designed as prestressed or partially prestressed. This type of component is designed as continuous for imposed loads in its final form, while being simply supported during the erection phase. They are also designed in such a way that no propping is required during erection of the supported floor. The precast floor components sit directly on the edge of the inverted Tee beam.

7. **What is shear wall?**

   Shear wall are vertical elements of the horizontal force resisting system. Shear walls are constructed to counter the effects of lateral load acting on a structure. In residential construction shear walls are straight external walls that typically form a box which provides all of the lateral support for the buildings.

8. **Give the classification of floor slab?**

   Precast concrete floors offer significant advantages in many types of building construction. They offer design, time and cost advantages over other flooring materials and systems and are suitable for use with all structural systems, ie. Concrete, masonry and steel.

9. **What are the lateral loads resisting elements in a building?**

   Beams, columns, shear walls, wall panels.

10. **What are the loads acting on wall panels?**

    - Longitudinal load
    - Transverse load
    - Wind load
    - Seismic load

11. **What is meant by standardization of prefabricates?**

    Standardization of prefabricates may be on a national scale comprising the whole country and the authorities should publish catalogues of standard prefabricates and standard housing units or even the whole buildings. It is useful in the design of coordinated set of buildings or development of a housing unit, industrial estate.

12. **What are the different shapes of prefabricated components?**

    Tee section, I section, V section, U section Bar section.

13. **What are composite prefabricates?**

    When the prefabricates are made up of different materials they are called as composite prefabricates. It consists of structural and non-structural layers in which the structural layer may be of solid concrete or RCC whereas the non-structural layer is basically made up of resilient material or sound proof material etc. depending on the application of the prefabricates as floor panels.

14. **What are the characteristics to be considered while devising the system?**

o Intensified usage of spaces	o Standardized service and stair units.
o Straight and simple walling scheme	o Structural clarity and efficiency
o Limited sizes and numbers of components	o Ease of manufacturing, storing, and transporting
o Limited opening in bearing walls	o Speed and ease of erection.
o Regulated location of partitions	o Simple jointing system.

15. **What are the common defects in prefabricated panels?**
    - Panels are not properly touch up
    - Damage due to insufficient protection during delivery
    - Panel dimension deviation
    - Panel twisted and no rectangular
    - Wrong nib and architectural details

16. **Write the general failures of prefabricated structures?**

    Bridge deck collapse – caused due to inadequate lap length of rebar at cantilever decks and pier rebar.

    Single T-beam collapse – caused due to impact load on precast unit.

17. **How the roofing members are classified?**
    - Hollow core section
    - Double T section
    - Channel section
    - Light weight concrete roofing slab
    - Solid rectangular planks

    Usual width of slab: 0.5 m

    Span: upto 5 m.(non prestressed members)

18. **Give the classification of large panel system?**
    - ***Cross wall system***

    In this cross wall system, the cross walls are load bearing wall where the façade wall is non load bearing wall. This type of cross wall system is applicable to *high rise buildings*.

    - ***Long wall system.***

      In this system the cross wall are non-load bearing whereas the longitudinal walls are load bearing. This type of system find its application in *low rise buildings.*

19. **How the precast concrete walls are classified?**
    - Homogeneous wall – solid , hollow , ribbed.
    - Non homogeneous wall – composite and sandwich panel
        - ❖ load bearing wall, non load bearing wall and shear wall.

20. What are exterior walls and interior walls?

Based on function and utility precast concrete walls are divided into two types

- Exterior walls- non homogeneous –load bearing wall- sandwich type – better thermal resistant
- Interior walls – homogeneous – resistant to horizontal & vertical loads- fire resistant

21. What are classification of shear walls?

- Simple rectangular- flanged shear walls
- Column supported shear walls
- Coupled shear walls
- Rigid frame type
- Frames with infill and without infill
- Core type shear wall

22. Give the types of shear walls?

- R.C.C shear walls
- Plywood shear walls
- Midply shear walls
- R.C. Hollow concrete block masonry shear wall
- Steel plate shear wall.