PART - A

1. Explain briefly the disuniting of structures? [May/June 2012][Nov/Dec 2013]

In prefabrication many elements of prefabricated, are assembled or united or joined to form a single structures.

The problem in prefabrication is the transportation. To avoid this problem of transportation, the structure is disunited or separated into smaller or elements, so that the transportation becomes very easy.

2. Write the advantages of disuniting structures? [Nov/Dec 2012]

- The number of joints is reduced.
- Failure at joints is minimum.
- This disuniting method is suitable for site prefabrication.
- Transportation cost for many elements to the site is reduced.

3. Write the disadvantages of disuniting of structure?

- The lifting or hoisting of the entire frame is more difficult.
- Transportation of the frame from the plant is difficult.
- Transport cost is high for the transport of entire frame.
- The stress distribution during lifting is a problem.

4. How can we classify the prefabrication principles?

Prefabricates are classified as homogeneous and composite based on the number of different material used in fabrication.

5. Mention the design of c/s in prefabrication?

The c/s of precast reinforced concrete structure is normally having the following.

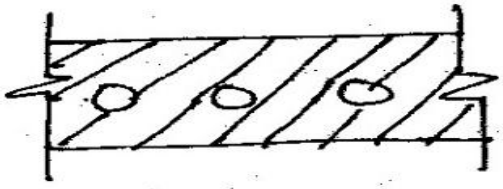
- Tee section
- I section
- U or v section

6. Write the classification of homogeneous prefabrication?

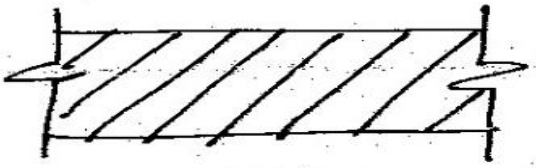
The homogeneous unit may be classified into 3 types.

- Hollow
- Solid
- Ribbed

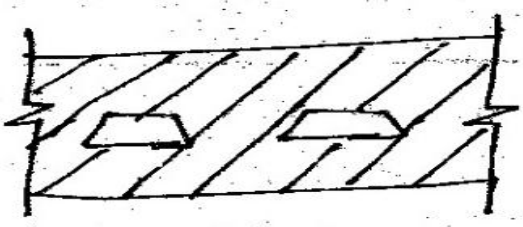
Hollow



Solid



Ribbed

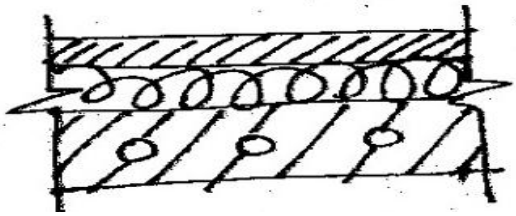


7. Write the classification of composite prefabrication?

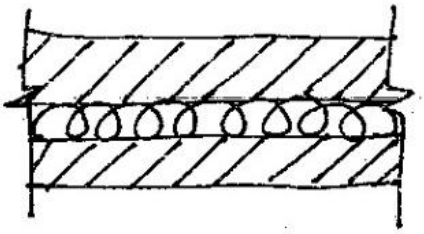
The composite unit may be classified into 3 types.

- Cored
- Solid
- Ribbed

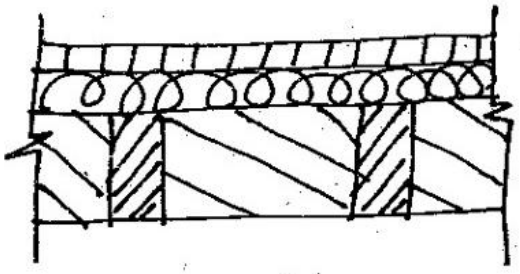
Cored



Solid



Ribbed



8. How does the material used in construction affect the design of the element? [May/June 2009]

The materials for the construction are classified as homogeneous and composite based on the number of different material used in prefabrication.

9. Explain joint deformation? [May/June 2009] [May/June 2012]

Various structural elements are made in the plant or prefabricated when these elements in their site there may be joint deformation to take it workout deformation.

10. Mention some important requirements of the joint flexibility? [May/June 2013]

- The construction of joint should be easy.
- The joint should require little material.
- Joint should not consume more labour.
- Less labour is to be required.
- The cost should be minimum.

11. Distinguish between rigid joint and hinged joint with reference to prefabricated construction? [Apr/May 2013]

The rigid joints are of adequate (sufficient) strength, in addition to bearing of tensile, compressive and shear force and for resisting bending moment.

The hinge joint is those which can transmit force passing through the hinge itself allow sudden motion and rotation.

12. Write the system consisting of linear member disunited at joint?

Disunity at joint gives the linear member, this means a great advantages and facility from the view point of both manufacture and assembly. Using this system, auxiliary scaffolding is not necessary and the hoisting process is as a rule very simple.

13. Explain joint flexibility. [Nov/Dec 2013][May/June 2013]

A joint that holds two parts together so that one can swing relative to the other is called joint flexibility.

14. List the disadvantages of precast construction. [Apr/May 2011]

- Very heavy members
- Camber in beams and slabs
- Very small margin for error
- Connections may be difficult
- Somewhat limited building design flexibility