

DESIGN AND DRAWING OF WATER TANKS

Attempt all the questions (Out of 70%)

Time: three hours

Observe silence

Question 1. (10 Marks)

Define the following terms:

- a) Gantry girder:
- b) Truss:
- c) Footings:
- d) Reinforced Cement Concrete (R.C.C):
- e) Weld:

Question 2. (10 Marks)

When two members are connected by means of welds, such a connection is known as a welded connection. There are several types of welded connections as was discussed in class. Discuss any FIVE.

Question 3. (20 Marks)

State FIVE advantages and FIVE disadvantages of welded joints.

Question 4. (10 Marks)

Discuss briefly the following heads of tension members listed below.

- i. Wires, strands and cables.
- ii. Bars and rods.
- iii. Plates and flat bars.
- iv. Structural sections.
- v. Built up sections.

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Question 5. (10 Marks)

When designing and building conventional retaining walls, the earths pressure is considered for its stability. Earth pressure is the pressure exerted by the retaining material on the retaining wall. This pressure tends to deflect the wall outward. There are two types of earth pressure. State and discuss each of them.

Question 6. (10 Marks)

State FIVE steps necessary for checking the stability of any retaining wall