



# RAMCO INSTITUTE OF TECHNOLOGY

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NBA Accredited UG Programs: CSE, EEE, ECE and MECH

Department of Civil Engineering.  
Academic Year 2022– 2023 (Even Semester)

Degree, Semester & Branch: IV Semester B.E. Civil Engineering  
Course Code & Title: CE3403 – Concrete Technology  
Name of the Faculty member (s): Dr.G.Karthikeyan  
Innovative Practice Description

- Unit / Topic: Unit II / Open Book Test for Concrete Mix Design
- Course Outcome: CO3
- Topic Learning Outcome: TLO9
- Activity Chosen: Open Book Test
- Justification:

The Concrete Mix Design gives the clear idea about mix proportioning as per IS 10262 – 2019. Concrete mix design is the process of finding the different ingredients of the concrete mix. In this process for designing concrete mix is calculating the quantity of concrete ingredients such that cement, fine aggregates, coarse aggregates, admixtures and water as per IS method. For mix design problems students need to refer the code book.

- Time Allotted for the Activity: 20 minutes
- Details of the Implementation:
  - i. Problem statement is given to the students for each team (Max. 2 Students)
  - ii. IS 10262 – 2019 and IS456 - 2000 is shared through CANVAS LMS.
  - iii. Asked to refer the above code book and given data for 5 minutes
  - iv. Calculate the quantity of materials and solve the mix design problem for the 15 minutes using code book
- CO – PO / PSO mapping:

CO	PO1	PO2	PO3	PO12	PSO2
CO3	3	3	3	2	3

(1 – Low      2 – Moderate      3 – High)

- PO / PSO mapped:

Innovative practice	PO1	PO2	PO3	PO12	PSO2
Justification for correlation	Apply fundamental knowledge in mix design	Using the principles of Engineering mathematics, students will be able to	Understanding the concept and prepare the mix design	Latest techniques in Concrete mix proportioning	Use the computing technique for concrete mix design

prepare the  
quantity of  
materials

- Images / Screenshot of the practice:



- Reflective Critique:

- ❖ *Feedback of practice from students and other stakeholders:*

The students felt easy to understand and refer the current code book for the given problem. From the open book test, it is easy to refer the data and solve the mix design problem.

*Benefit of the practice:* (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)

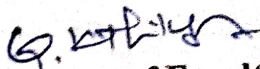
- Practiced for latest IS code book for mix design IS 10262 - 2019
- Easy to solve the problem from the code book

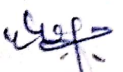
- ❖ *Challenges faced in implementation:*

Nil.

**References:**

- Text book for Concrete Technology, M.S.Shetty
- Proportioning IS 10262 – 2019 - Guidelines for Concrete Mix
- IS456 – 2000 – Code of Practice for Plain and Reinforced Concrete

  
Signature of Faculty Member

  
HOD