



III SEMESTER B.TECH. (Civil) END SEMESTER EXAMINATIONS, Nov-Dec 2023
SUBJECT: Building Materials [CIE 2123]

Instructions to Candidates:

- Answer **ALL** the questions.
- Missing data may be suitably assumed.
- Use of IS10262-2019 is permitted

Date of Exam: /05/2023

Max. Marks: 50

Sl.No	Questions	Marks	CO	BL
1A.	Comment on large scale use of construction and demolition waste as coarse aggregates.	2	1	4
1B.	Explain the significance of fineness modulus for fine aggregates for its use in concrete.	3	1	3
1C	What is the role of fillers and binders in concrete?	5	2	2
2A.	What are the precautions to be taken when the concrete is to be transported a long way before it is placed?	2	3	2
2B.	Comment on Microstructure development in concrete with and without micro fillers.	3	2	4
2C.	Explain the mechanism of pozzolanas in enhancing properties of concrete	5	3	2
3A.	Design a Mix for M30 concrete and 75mm slump. Binder paste consists of Portland cement with specific gravity of 3.15 and class F flyash with specific gravity of 2.35. Coarse aggregates obtained from nearby quarry is of sp gravity 2.67 while a mixture of quarry dust and crushed rock is used as fine aggregates with specific gravity of 2.66 and falls into zone IV.	8	2	3
3B.	What is the basic difference between design of normal concrete and self compacting concrete.	2	4	3
4A.	What is the benefit of using flyash blocks as masonry units in comparison with clay bricks	2	4	3
4B.	How does use cavitation affect the long term durability of cement based materials?	3	4	4
4C.	What are the possible protective coatings used for corrosion protection.	5	5	3
5A.	Elaborate the two essential components of floors with figure.	2	5	4
5B	What are flag stones? Where are they used?	3	5	4
5C	Compare plastic paint and enamel paint.	5	5	2