



IV SEMESTER B.TECH (CIVIL ENGINEERING)
 END SEMESTER EXAMINATIONS, JUNE 2022
SUBJECT: BUILDING MATERIAL TECHNOLOGY [CIE 2252]
REVISED CREDIT SYSTEM
 (_ / 06 / 2022)

Time: 3 Hours

Max. Marks: **50**

Instructions to Candidates:

- ❖ Answer ALL the questions
- ❖ Missing data may be suitably assumed
- ❖ IS 456 and IS 10262 is provided

Q.No		Marks	CO
1A.	What are the Characteristics of Second-Class Bricks? What are its usage?	5	5
1B.	Why concrete is most widely used engineering materials though it is neither as strong nor tough as steel?	3	3
1C.	What is the importance of aggregates in concrete?	2	1
2A.	With the neat sketch explain English bond and Flemish bond.	5	5
2B.	What is Coarse Aggregate? What is Grading of Coarse Aggregate?	3	1
2C.	What is soundness of cement?	2	2
3A.	What are the different types of floor? And explain any two of them.	5	5
3B.	Explain how the strength of concrete is affected by: <ul style="list-style-type: none"> a) Quality of raw materials b) Water/ cement ratio c) Coarse/ fine aggregate ratio 	3	3
3C.	What is grading of cement explain?	2	2
4A.	Design a M25 concrete for the following data: cement with 53 grade having specific gravity 2.88, Zone-III, Slump of 100 mm, for moderate exposure condition, coarse aggregate size of 40mm having specific gravity 2.76 and natural sand as fine aggregate having specific gravity 2.68. consider target mean strength as 31.6 N/mm ²	5	4
4B.	Briefly explain the three main properties of self-compacting concrete.	3	5
4C.	What is the classification criteria of Coarse Aggregates?	2	1

5A.	Write the quality control report for the following test observations on brick Size of the brick= 19cm x 9cm x 9cm Dry weight of the brick=3.1 Kg Weight of the brick after immersion in water for 24 hours= 3.658 Kg Load at failure= 12,221 Kg.	5	5
5B.	Write a short note on permeability of concrete.	3	3
5C.	What is significance of standard consistency of cement?	2	2