

**B. CONS. ENGG. 2<sup>ND</sup> YR 1<sup>ST</sup> SEMESTER EXAM.-2023****MATERIALS OF CONSTRUCTION****Time : Three hours****Full Marks : 100****PART I****Instructions : Use Separate Answer scripts for each Group  
Answer All Questions****[ 50 Marks for each Part ]**

No of Questions	Part I	Marks
	Answer all questions.	
Q1.a)	Discuss the different grades of Autoclaved Aerated Concrete Block as per IS: 2185 (Part 3)	7.5
Q1.b)	PPC and PSC is greener product than OPC from sustainable point of view.... Explain with proper logical depiction	7.5
Q2.	What is the full form of TMT Bar? TMT Bars are formed of two different mineralogical layers: explain this statement Some rebars are marked with "Fe500D". Explain the word D on the reinforcement bars.	15 (5+5+5)
Q3.	Why we use/prefer "I" shaped section as a beam or column section in structural engineering What is the governing code for structural section in IS standard What are the different grades are available in Indian market in structural steel member criteria.	15(7.5+2.5+5)
Q4.	What are the different physical properties we consider for clay burnt brick as per IS code... Discuss briefly	5

[ Turn over

## BE SECOND SEMESTER SECOND YEAR (CONSTRUCTION) EXAMINATION - 2023

Subject : **MATERIALS OF CONSTRUCTION (Part - II)**Answer parts of any question **SERIALLY**.

Answer **Question No. 1** & any **TWO** questions. Please start answering a question or part thereof from a **NEW** page. Answers should be brief. Please mark the answers with answer numerical & NOT as 'CO' Nos. which are for Course Curriculum from NAB concepts & students do NOT have any relation & relevance to the same. Different parts of the same question should be answered together.

1.	Discuss in brief the characteristics of Good Building Stones. Enumerate the merits & demerits of using Stone Masonry over conventional Brick Masonry. Distinguish between Rubble & Ashler Masonry. 6 X 3 = 18	CO1 [18]
2.	Discuss the usage & applicability of Terra-Cotta & Glazed white-ware products with reference to their relevance to construction industry. Enumerate the methodology of Timber Seasoning, with reference to natural & kiln process. Why is heart wood preferred by carpenter's as compared to sap wood. 6 + 6 + 4 = 16	CO3, CO4 [16]
3.	Elaborate the constituent parts of paints & indicate their relevance in the construction process. Discuss the relevance & cardinality of the BIS codes IS:3495(Parts 1- 3):1992) with IS:1077:1992 for the test of various parameters of burnt clay bricks. Indicate the steps of manufacture of Cement by wet.process. 6 + 5 + 5 = 16	CO5, CO2, CO6 [16]
4.	Discuss various types of bonds & closers used in masonry. Distinguish between brick copings & corbels. Enumerate the salient terms used in stairs. Estimate the various forms of false works used in construction practice with reference to scaffolding. How are shores different from scaffolds ? 5 + 3 + 4 + 4 = 16	CO2, CO7, CO8 [16]