**Code No.PC301CE**

**METHODIST COLLEGE OF ENGINEERING & TECHNOLOGY (An Autonomous Institution)**

**B.E. (CIVIL) III-Semester (AICTE) (Regular) Examination, Feb -2023**

**Subject: BUILDING MATERIALS AND CONCRETE TECHNOLOGY**

**Time: 3 hours Max.Marks:60**

**Note: Missing data, if any, maybe suitably assumed.**

**PART-A**

**Answer All the questions.**

|  |  |  |  |  |
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| **Q.No.** | **Questions** | **Marks** | **CO** | **BTL** |
| **1. a** | **Differentiate load bearing and non-load bearing blocks?** | **2** | **1** | **2** |
| **b** | **What are the constituents of paints?** | **2** | **1** | **3** |
| **c** | **Explain about initial and final setting time of cement?** | **2** | **3** | **2** |
| **d** | **What are gap graded aggregates?** | **2** | **3** | **2** |
| **e** | **Why is pointing necessary?** | **2** | **2** | **2** |
| **f** | **What are causes of dampness?** | **2** | **2** | **2** |
| **g** | **What is segregation?** | **2** | **4** | **2** |
| **h** | **How does the texture and shape of aggregate effect workability of concrete?** | **2** | **4** | **3** |
| **i** | **Briefly explain the significance of water cement ratio in concrete** | **2** | **5** | **3** |
| **j** | **Evaluate target mean strength of M40 grade concrete for mild exposure used for RCC.** | **2** | **5** | **3** |

**PTO**

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**PART-B**

**Answer Any Five questions**.

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| **Q.No.** |  |  **Questions** | **Marks** | **CO** | **BTL** |
| **2.** | **a** | **What are methods of artificial seasoning of timber??** | **4** | **1** | **4** |
| **b** | **What are the various components of paint and their purpose?.** | **4** | **1** | **4** |
| **3.** | **a** | **Explain the methods of plastering process.**  | **4** | **2** | **5** |
| **b** | **What are the methods or types of pointing?** | **4** | **2** | **4** |
| **4.** | **a** | **Explain the alkali aggregate reaction and its applications in concrete deterioration?** | **4** | **4** | **4** |
| **b** | **Explain in detail the physical properties of fine ad coarse aggregates needed for a good concrete?** | **4** | **4** | **5** |
| **5.** | **a** | **What is creep and shrinkage and explain about the type of shrinkage?** | **4** | **5** | **4** |
| **b** | **Explain the steps involved in British Concrete mix design.** | **4** | **5** | **5** |
| **6.** | **a** | **What is DPC? Mention the effects of dampness in building.** | **4** | **2** | **4** |
| **b** | **What are constituents of concrete and tests conducted on hardened concrete?** | **4** | **4** | **4** |
| **7.** | **a** | **Discuss the advantages of mineral and chemical admixtures in concrete.** | **4** | **3** | **4** |
| **b** | **Explain about the methods of curing of concrete and the factors influencing it** | **4** | **3** | **4** |
| **8.** |  | **Design a mix for M35 grade concrete assuming all the physical properties of the concrete making materials.** | **8** | **5** | **6** |
| **9.** | **a** | **How are bricks classified? How do they differ in compressive strength?** | **4** | **1** | **4** |
| **b** |  **What is a distemper mention its types and application** | **4** | **1** | **4** |

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