Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14CE2036** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PREFABRICATED STRUCTURES** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Summarize the advantages and setbacks in prefabrication. | CO1 | 5 |
| b. | Illustrate the points you will consider for selecting materials for prefabrication. | CO2 | 5 |
| c. | Explain in detail the general principles of prefabrication techniques. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Discuss the concepts of production techniques in prefabrication. | CO2 | 10 |
| b. | Give your opinion about modular coordination and explain its salient points | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Analyze the transportation and erection techniques of prefabrication. | CO2 | 13 |
| b. | List and compare the various features of cranes. | CO2 | 7 |
| (OR) | | | | |
| 4. | a. | Highlight large panel construction concept in detail. Differentiate between the behavior of frame and large panel construction in precast structures. | CO1 | 12 |
| b. | Give your opinion about standardization and prefab components. | CO2 | 8 |
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| 5. | a. | Recommend suitable technique to resist the lateral loads in order to help prefabricated structure. | CO1 | 12 |
| b. | Discuss about disuniting of structure. | CO2 | 4 |
| c. | Infer box type construction. | CO1 | 4 |
| (OR) | | | | |
| 6. | a. | Compare joint deformation and joint flexibility and maximize its importance. | CO1 | 8 |
| b. | Explain the purpose and application of Expansion joint. | CO2 | 8 |
| c. | Recall the significant advantages of prestressed concrete in prefabricated structure. | CO2 | 4 |
|  |  |  |  |  |
| 7. | a. | Imagine you are the project engineer and there is a requirement to convince a client to accept prefabricated structure by explaining various prefabricated construction components. How will you convince? | CO2 | 15 |
| b. | Give examples for partial prefabrication and full prefabrication system. | CO1 | 5 |
| (OR) | | | | |
| 8. | a. | Explain in detail the different structural connections in precast building. | CO1 | 15 |
| b. | Imagine there is a need for constructing 30 m floor span slab. Which slab will be opted for this type of construction? Justify. | CO2 | 5 |
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|  | | **Compulsory**: |  |  |
| 9. | a. | Interpret progressive collapse and elaborate codal recommendations to prevent progressive collapse. | CO2 | 10 |
| b. | Compare traditional RCC structure and prefabricated structure and give your recommendation for construction among the two and explain why. | CO1 | 6 |
| c. | State and explain the four classes of abnormal load. | CO2 | 4 |