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

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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec - 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14CE201** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **PREFABRICATED STRUCTURES** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | Concrete which is capable of flow, fill and passing through congested reinforcement is \_\_\_\_\_\_\_\_\_\_\_. | (1) |
| 2. | Nominal length preferred for casting precast floor elements \_\_\_\_\_\_\_\_\_\_. | (1) |
| 3. | Name the type of curing used to cure precast elements in precast plants \_\_\_\_\_\_\_\_\_\_\_. | (1) |
| 4. | Precast units shall have a bearing at least of \_\_\_\_\_\_\_ on masonry supports. | (1) |
| 5. | Lifting clutches are used for \_\_\_\_\_\_\_\_\_ the precast elements. | (1) |
| 6. | Give example for sealants used at precast joint \_\_\_\_\_\_\_\_\_. | (1) |
| 7. | Name the reinforcement which is used to prevent the progressive collapse \_\_\_\_\_\_\_\_. | (1) |
| 8. | Recommended weight of precast floor and roof slab panel \_\_\_\_\_\_\_\_\_. | (1) |
| 9. | Write the possible stresses that arise during the precast concrete construction \_\_\_\_\_\_\_\_\_. | (1) |
| 10. | List some of the examples for abnormal loading \_\_\_\_\_\_\_\_\_\_. | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11 | Define light weight concrete. | (3) |
| 12 | What is shear connector? | (3) |
| 13 | Write the standard dimensions of different precast elements. | (3) |
| 14 | List different types of prefabricated components which are used in construction industry. | (3) |
| 15 | What are the different types of precast wall used in construction industry? | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. | a. | Explain the key factors to be considered while selecting the materials for prefabrication. | (15) |
| (OR) | | | |
| 17. | a. | Briefly explain the erection process of precast elements followed by construction industry. | (15) |
| 18. | a. | Discuss the behaviour of precast slab elements in detail with neat sketches. | (15) |
| (OR) | | | |
| 19. | a. | Examine the behaviour of precast walls and its joints with neat sketches. | (15) |
| 20. | a. | Write the design considerations and requirements of precast structure. | (15) |
| (OR) | | | |
| 21. | a. | How the precast component or structures are tested to check its load carrying capacity, also analyse the criteria for conformity? | (15) |
| 22. | a. | Write the requirements of a good structural joint; also explain its behaviour against structural loading. | (15) |
| (OR) | | | |
| 23. | a. | Explain different types of joints and jointing techniques which are used in precast frame construction. | (15) |
| 24. | a. | Explain the design requirements for safety against progressive collapse as per the codal provisions. | (15) |
| (OR) | | | |
| 25. | a. | Discuss the different stages on precasting of concrete products. | (15) |

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