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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**End Semester Examination – April/May– 2017**

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| **Sub. Code:** | **14CS3081** | **Duration :** | **3hrs** |
| **Sub. Name:** | **REAL TIME UNIFIED MODELING LANGUAGE** | **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. | Explain in detail about the development activities of the ROPES process in real time system. | CO1 | 14 |
| b. | How does object oriented methodology differ from other programming methodologies? | CO1 | 6 |
| (OR) | | | | |
| 2. | a. | List the different types of Real Time System. | CO1 | 4 |
| b. | Demonstrate the relationship between objects and classes in UML. | CO3 | 12 |
|  | c. | Write short notes on UML stereo types. | CO1 | 4 |
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| 3. | a. | Consider an instrument which is used for recording an ECG signal during surgery. Illustrate how the Use Cases can be applied for embedded implementation of above given system. | CO1 | 10 |
| b. | Sequence diagrams show the sequence of messages between objects. Justify your answer with one example. | CO3 | 10 |
| (OR) | | | | |
| 4. | a. | Discuss the role of object oriented discovery process in UML. | CO1 | 6 |
|  | b. | Explain in detail about all the key strategies for object identification. | CO3 | 14 |
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| 5. | a. | Define operations and explain the various types and strategies for defining operations. | CO1 | 14 |
| b. | Write short notes on three types of object behavior. | CO1 | 6 |
| (OR) | | | | |
| 6. | a. | With neat sketch, explain the Timing diagram with suitable example. | CO1 | 10 |
| b. | Draw the basic state charts and explain the function of different pseudo states in UML. | CO1 | 10 |
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| 7. | a. | With neat sketch, illustrate the Concurrent state diagram. | CO3 | 10 |
|  | b. | Discuss the role of different strategies for identifying threads. | CO3 | 10 |
| (OR) | | | | |
| 8. | a. | Elaborate the different architectural issuesindesigning a real time system. | C02 | 12 |
| b. | Write short notes on different levels of design used in UML . | CO2 | 8 |
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|  | | **Compulsory:** |  |  |
| 9. |  | Discuss the following   1. Master Slave Pattern 2. MicroKernel Pattern 3. Proxy Pattern 4. Broker Pattern | CO2 | 20 |

ALL THE BEST