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## MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA (2Y) II Year I Semester (R14) Supplementary End Semester Examinations – June 2018

(Regulations: R14)

### OBJECT ORIENTED ANALYSIS AND DESIGN (USING UML)

Time: 3Hrs

Max Marks: 60

Attempt all the questions. All parts of the question must be answered in one place only.

**In Q.no 1 to 5 answer either Part-A or B only**

- |           |   |       |
|-----------|---|-------|
| Q.1(A)    | (i) Illustrate that, how objects respond to messages?<br>(ii) Explain hierarchy of classes with inheritance and polymorphism.                       | 6 + 6 |
| <b>OR</b> |   |       |
| Q.1(B)    | (i) Discuss the orthogonal view of the software.<br>(ii) What are the reasons for moving from traditional techniques to object oriented techniques? | 6 + 6 |
| <hr/>     |   |       |
| Q.2(A)    | (i) How design patterns are classified?<br>(ii) Explain about mediator design pattern with suitable example.  | 4 + 8 |
| <b>OR</b> |   |       |
| Q.2(B)    | (i) Why modeling is required? Compare the static and dynamic models.<br>(ii) Explain briefly about different UML diagrams.                          | 6 + 6 |
| <hr/>     |   |       |
| Q.3(A)    | (i). Why analysis is a difficult activity during software development?<br>(ii). How to develop an effective documentation of a project?             | 6 + 6 |
| <b>OR</b> |   |       |
| Q.3(B)    | Explain about how classes are identified by following approaches:<br>(i). Common class pattern approach<br>(ii). Use case driven approach           | 6 + 6 |
| <hr/>     |   |       |
| Q.4(A)    | Draw and Explain the two interaction diagrams for the following operations in a library.<br>(i). Issuing of book<br>(ii). Renewal of Book           | 6 + 6 |
| <b>OR</b> |   |       |
| Q.4(B)    | With a suitable example, Draw and Explain the following diagrams:<br>i. Sequence Diagrams<br>ii. Collaboration Diagrams                             | 6 + 6 |
| <hr/>     |   |       |
| Q.5(A)    | (i) Discuss the impact of object orientation on testing.<br>(ii) What are the guidelines for providing quality assurance test cases?                | 6 + 6 |
| <b>OR</b> |   |       |
| Q.5(B)    | Explain clearly about the various testing strategies in detail with suitable examples.  | 12M   |

**\*\*\* END\*\*\***