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



**End Semester Examination – Nov / Dec – 2019**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14CS2034** | **Duration :** | **3hrs** |
| **Sub. Name :** | **OBJECT ORIENTED ANALYSIS AND DESIGN** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Describe the following concepts in Object Oriented Analysis.   * Encapsulation * Class Hierarchy * Polymorphism * Inheritence | CO1 | 20 |
| b. | Online ticket reservation application is to maintain flight detail, flight status, reservation, cancellation process. The flight status maintains flight ID, flight name, arrival time, departure time and also it contain details about the seats such business class seats, economic class seats. The flight detail contains the details about needed flight name as well as the details about the seats. Flight reservation contains the flight ID, ticket number, passenger name, destination, flight name, business and economic class seats, travel charge, passport number, date of travel reserved.   1. Identify the actors and use cases for the above application. 2. Specify the functional requirements for the above application. 3. Construct use case diagram with necessary extends relationship. 4. Identify the various classes and draw the class diagram with multiplicity relationship. 5. Differentiate between aggregation and composition relationship in the above application. | CO2 | 20 |
| (OR) | | | | |
| 2. | a. | Describe the various activities involved in Software Development process in detail. | CO2 | 10 |
|  | b. | Explain how dynamic model is used to represent time-dependent aspects of a system. | CO3 | 10 |
|  |  |  |  |  |
| 3. | a. | Compare and contrast the object oriented methodology of Booch, Rumbaugh and Jacobson. | CO2 | 10 |
|  | b. | List the differences between pattern and framework. | CO2 | 10 |
| (OR) | | | | |
| 4. | a. | Identify and write the objects from the grocery store problem using noun phrase approach. A store wants to automate its inventory. It has point-of-sale terminals that can record all of the items and quantities that a customer purchases. Another terminal is also available for the customer service desk to handle returns. It has a similar terminal in the loading dock to handle arriving shipments from suppliers. The meat department and produce department have terminals to enter losses/discounts due to spoilage. | CO3 | 15 |
|  | b. | Write down the main purpose of classes, responsibilities and collaborators with example. | CO3 | 5 |
|  |  |  |  |  |
| 5. | a. | List the Object oriented design Axioms and Corollaries. | CO3 | 10 |
|  | b. | Write a report on the tools that support pattern based design and development. | CO3 | 10 |
| (OR) | | | | |
| 6. | a. | Summarize the methods used in class visibility and refining attributes while designing classes. | CO2 | 10 |
|  | b. | Report the steps involved in Rumbaugh et al.’s Object Modeling Technique. | CO2 | 10 |
|  |  |  |  |  |
| 7. |  | Describe the process of micro level user interface design in view layer according to the rules designed based on axioms and corollaries. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Write the fundamental characteristics of the following database approaches for object store and persistence.   1. Database Model 2. Relational Model 3. Network Model | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Describe the design rules of corollaries that are more useful than axioms in making design specific decisions with neat diagram. | CO1 | 20 |