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**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
END TERM EXAMINATION - JAN 2023**

Semester : Semester III - 2021

Course Code : CSE3082

Course Name : Sem III - CSE3082 - Object Oriented Analysis and Design

Program : B.Tech. CBC/CBD/CCS/CSD/CDV/CIT/ISE/IST/ISD

Date : 17-JAN-2023

Time : 1.00PM - 4.00PM

Max Marks : 100

Weightage : 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.

PART A

ANSWER ALL THE TEN QUESTIONS

10 X 2 = 20M

1. Describe in a sequential manner the elements of object orientation namely objects, classes and meta-class.
(CO1) [Knowledge]
2. Draw the block diagram for class, Responsibilities and Collaborators.
(CO1) [Knowledge]
3. What are the three ways and perspectives to Apply UML?
(CO2) [Knowledge]
4. List the tools used to extract the information from the user.
(CO2) [Knowledge]
5. Mention the types of axioms and its role.
(CO3) [Knowledge]
6. What are the two types of coupling?
(CO3) [Knowledge]
7. What are the main activities in design process?
(CO3) [Knowledge]
8. Define schema or meta-data.
(CO4) [Knowledge]
9. Give the activities involved in design view layer classes.
(CO4) [Knowledge]
10. What is meant by database model? Give the different database models.
(CO4) [Knowledge]

PART B

ANSWER ALL THE FIVE QUESTIONS

5 X 10 = 50M

11. Identify the use cases and actors for Supermarket System and depict it with a Use Case diagram:
Supermarket: A supermarket needs to develop the following software to encourage regular customers. For his, the customer needs to supply his/her residence address, telephone number, and the driving license number. Each customer who registers for this scheme is assigned a unique customer number (CN) by the computer. A customer can present his CN to the checkout staff when he makes any purchase. In this case, the value of his purchase is credited against his CN. At the end of each year, the supermarket intends to award surprise gifts to 10 customers who make the highest total purchase over the year. Also, it intends to award a 22 caret gold coin to every customer whose purchase exceeded Rs.10,000. The entries against the CN are the reset on the day of every year after the prize winners' lists are generated.
- (CO1) [Comprehension]
12. Solve Noun phrase approach for Yummy Ltd, a food delivery mobile application, wants to increase the number of establishments and wants to include coffee shops and supermarkets. Analysts need to find how the newly featured establishments and wants to include coffee shops and supermarkets. Analysts need to find how the newly featured establishments benefit from current software parameters and what user needs might prompt the software through to the next stage.
- (CO2) [Comprehension]
13. To conduct an exam, the instructor first notifies the students of the exam date and the material to be covered. S/he then prepares the exam paper (with sample solutions), gets it photocopied through office staff to produce enough copies for the class, and hands it out to tudents on the designated time and location. The students write their answers to exam questions and hand in their papers to the instructor. The instructor then gives the exam papers to the TAs, along with sample solutions to each question, and gets them to evaluate it. She/he then records all marks and returns the papers to the studentsØ Draw a sequence diagram that represents this process. Make sure to show when each actor is participating in the process. Also, show the operation that is carried out during each interaction, and what its arguments are.
- (CO3) [Comprehension]
14. Draw the colloboration diagram for XYZ Bank, the employees working in the bank are categorized as managers and associates.The main services provided by the bank are home loan,personal loan,account opening and closing,deposit,withdrawal of money and issuing renewal of debit cards.The bank wants to computerize the entire operation.
- (CO3) [Comprehension]
15. Illustrate the process of how quality of software is assured.
- (CO4) [Comprehension]

PART C

ANSWER ALL THE TWO QUESTIONS

2 X 15 = 30M

16. Differentiate between Sequence diagram and Activity diagram by drawing a Sequence diagram and activity diagram for Railway Ticket reservation systems which should include reservation facility, Transaction processing and Cancellation facility..
- (CO3) [Application]
17. Draw the Deployment Diagram for E-Commerce System.
- (CO4) [Application]
